

EAGLE TUGS



PARTS & SERVICE MANUAL



Vehicle Types: TT-4, TT-5, TT-6, & TT-8

Engine Type: Isuzu Diesel 4JB1 & 4JG1 Engine Models

INTRODUCTION

From everyone at Eagle Tugs, we would like to say Thank You for purchasing an Eagle TT-series tow tractor. We take a lot of pride in the quality of the products that we build, as well as our continued customer service. Our goal is to build a long term relationship with our customers. We want you, the customer, to be 100% satisfied with your Eagle experience. To us, this means that your Eagle TT-series tractor is functionally superior to any other products you have used. This also means that your Eagle product is continually supported in a professional, timely manner.

PURPOSE & USE OF THIS MANUAL

This manual is designed as a reference guide to make the reader more familiar with the components of the Eagle TT-4, TT-5, TT-6, and TT-8 tow tractor models. This manual includes part numbers and descriptions to assist the reader in ordering component spare/service parts. The manual also outlines the Scheduled Maintenance Intervals recommended by Eagle in order to keep your vehicle running properly. In this manual you will also find the Eagle Standard Warranty on all of the TT-series tow tractors. However, for more detailed information on the Eagle Warranty and procedure, as well as information pertaining to the safe operation of your Eagle product, please see the Eagle Operations Manual that was also included with your vehicle.

TECHNICAL ASSISTANCE

When addressing a repair procedure or operational problem, please remember that Eagle technical support is only a phone call away. Eagle technicians are available to assist you in vehicle diagnostics and recommended repair procedures. We encourage you to use this service to reduce machine down-time and to gain a better understanding of proper repair procedures.

ORDERING SPARE/SERVICE PARTS

Eagle inventories most of the component parts found in its TT-series tow tractors, and most spare/service parts can be shipped the same day the order is received. Parts orders need to be received at Eagle by 12:00 pm (Noon) EST in order for the parts to be shipped that same day. Parts ordered after 12:00 pm EST will most likely be shipped the following day.

CONTACT INFORMATION

Eagle Corporate Office

26111 Northline Rd
Taylor, MI 48180
(800) 671-0431
www.eagletugs.com

Customer Service

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(734) 442-1000 -- (800) 671-0431

Parts & Service

parts@eagletugs.com
(734) 442-1000 -- (800) 671-0431

Technical Support

support@eagletugs.com
(734) 442-1000 -- (800) 671-0431

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WARRANTY

VEHICLE ID INFORMATION

This information can be found on the tractor's I.D. Plate located on the firewall next to the driver's seat. Additionally, there is a permanent serial number located on the rear bulkhead inside the engine compartment.


MODEL _____

SERIAL NO _____

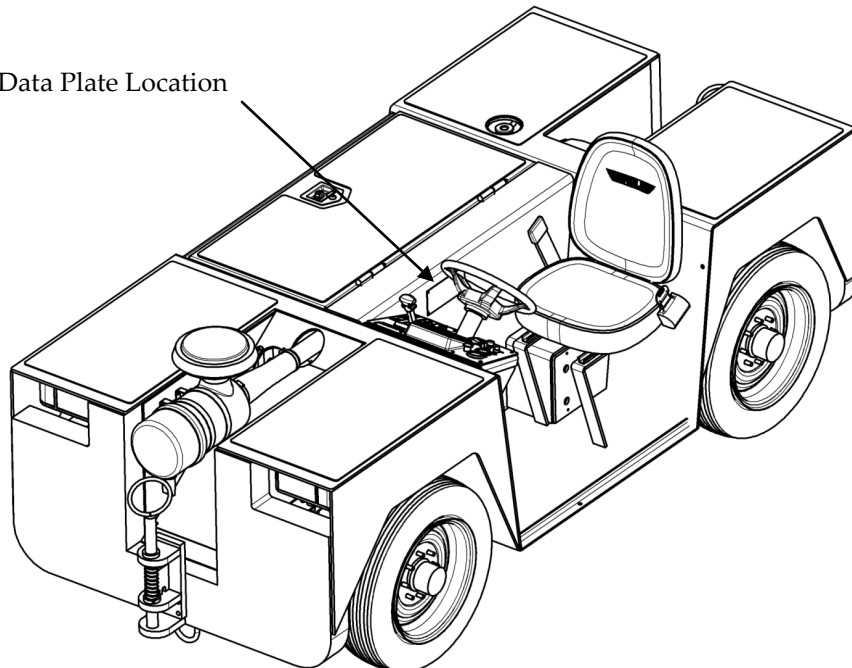
MFG DATE _____

ENGINE TYPE _____

ENGINE SERIAL NO _____

| | | | | | | |
|---|-------|---------------------|----|-------|----|-------|
| VEHICLE S/N | _____ | ENGINE POWER | kW | _____ | hp | _____ |
| MFG. DATE | _____ | TRACTOR MASS | kg | _____ | lb | _____ |
| MODEL # | _____ | DRAW BAR PULL | N | _____ | lb | _____ |
| ENGINE | _____ | TOW CAPACITY | kg | _____ | lb | _____ |
| ENGINE S/N | _____ | VERTICAL HITCH CAP. | N | _____ | lb | _____ |
| MANUFACTURED BY:  26111 NORTHLINE RD. TAYLOR, MI 48180 USA PHONE: 800-671-0431 sales@eaglelugs.com www.eaglelugs.com | | | | | | |

Data Plate Location



WARRANTY

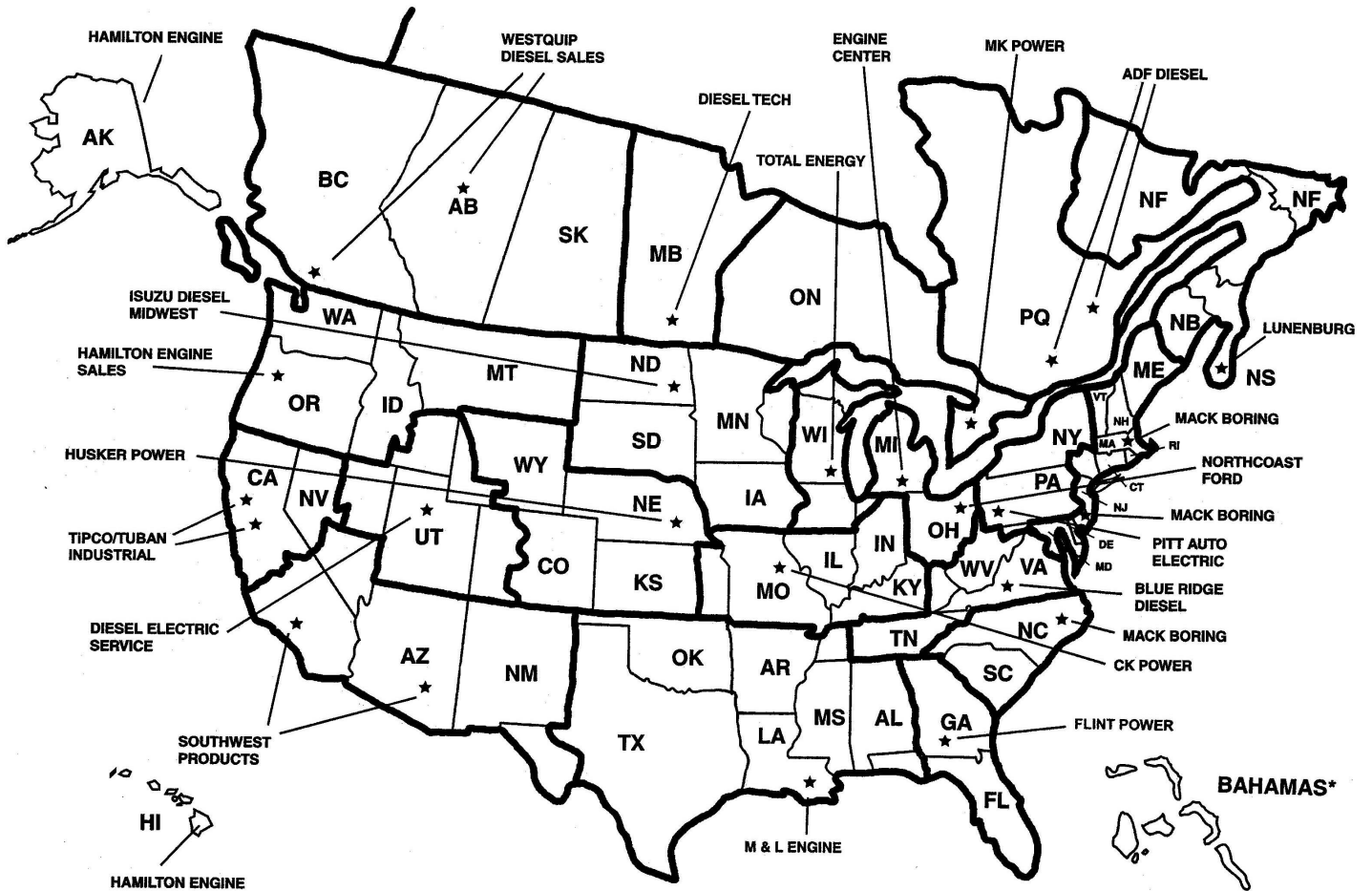
WARRANTY INFORMATION

Please read the Eagle Tugs warranty statement (available on our website) carefully.

When contacting Eagle Tugs for warranty or parts service, please have the following information ready:

- Tractor model number
- Tractor serial number
- Current hour reading

AUTHORIZED ISUZU DISTRIBUTOR MAP



AUTHORIZED ISUZU DISTRIBUTOR DIRECTORY

| UNITED STATES | | UNITED STATES, cont'd. | |
|---|---|---|---|
| BLUE RIDGE DIESEL INJECTION INC 1016 Delaware Street Salem, VA 24153-0867 540.389.7296 800.476.0456 540.387.2792 fax www.blueridgediesel.com | ISUZU DIESEL MIDWEST 3141 - 39 Street, SW Fargo, ND 58104 701.282.7915 877.831.7915 701.282.2472 fax joelck3@aol.com | SOUTHWEST PRODUCTS CORP 5143 W. Roosevelt Phoenix, AZ 85043 602.269.3581 877.779.3581 602.269.8448 fax www.southwestproducts.com | TOTAL ENERGY SYSTEMS 8525 North 87 Street Milwaukee, WI 53224 414.357.7900 800.236.6626 414.357.6278 fax www.totalenergysystems.com wschmidt@totalenergysystems.com |
| CK POWER PRODUCTS 1100 Research Blvd St. Louis, MO 63132 314.868.8620 314.868.9314 fax www.ckpower.com jcostello@ckpower.com | M & L ENGINE, LLC 1212 St. Charles Street Houma, LA 70360 985.857.8000 800.960.0068 985.851.0006 fax www.mlengine.com sales@mlengine.com | SOUTHWEST PRODUCTS CORP** 2760 Junipero Signal Hill, CA 90755 562.424.0913 877.779.3581 562.424.4517 fax www.southwestproducts.com | TUBAN INDUSTRIAL PRODUCTS CO 2003 Leghorn Mt. View, CA 94043 650.968.2431 800.648.4726 650.969.1267 fax www.tubanonline.org info@tubanonline.org |
| DIESEL ELECTRIC SERVICE & SUPPLY CO 652 West 1700 South Salt Lake City, UT 84104 801.972.1836 801.975.7316 fax www.dessco.com | MACK BORING & PARTS CO** 48 Leona Drive Middleborough, MA 02346 508.946.9200 800.622.5364 ext 3 508.946.0779 fax www.mackboring.com | TIPCO** 8440-C Belvedere Avenue Sacramento, CA 95826 916.383.1956 800.458.4726 916.383.4296 fax www.tubanonline.org info@tubanonline.org | |
| ENGINE CENTER** 2351 Hilton Road Ferndale, MI 48220 248.399.0002 800.726.8870 248.399.3142 fax info@enginecenter.com | MACK BORING & PARTS CO** 4500 Northchase Parkway, NE Wilmington, NC 28405 910.792.1900 800.622.5364 ext 2 910.792.6266 fax www.mackboring.com carolina@mackboring.com | CANADA | |
| FLINT POWER SYSTEMS 408 South Westover Blvd Albany, GA 31707 229.888.1900 800.821.4025 229.435.2946 fax www.flintpower.com | MACK BORING & PARTS CO 2365 Route 22 West Union, NJ 07083 908.964.0700 800.622.5364 ext 1 908.964.8475 fax www.mackboring.com sales@mackboring.com | ADF DIESEL 1790, route de l'Aéroport Ste-Foy, PQ G2E 3L9 418.681.0631 800.265.6720 (Canada) 418.681.3686 fax www.adfdiesel.com | LUNENBURG FOUNDRY & ENGINEERING, LTD 53 Falkland Street Lunenburg, NS B0J 2C0 902.634.8827 902.634.8886 fax (head office) 902.634.8889 fax (sales, parts & service) www.lunenburgfoundry.com |
| HAMILTON ENGINE SALES INC 5540 NE Columbia Blvd Portland, OR 97218 503.288.6714 800.437.3644 503.287.8289 fax www.hamiltonengine.com | NORTH COAST FORD INDUSTRIAL 11885 Bellaire Road Cleveland, OH 44135 216.251.5800 800.423.1316 216.251.8675 fax www.northcoastford.com mail@northcoastford.com | ADF DIESEL** 2355 Boul Hymus Dorval, PQ H9P 1J8 514.684.0440 800.517.1489 (Canada) 514.684.2417 fax www.adfdiesel.com marc.fontaine@adfdiesel.com | M-K POWER PRODUCTS 5641 McAdam Road Mississauga, ON L4Z 1N9 905.890.5323 800.263.5011 905.890.6660 fax 800.430.0344 fax www.m-k.com |
| HUSKER POWER PRODUCTS 2955 West Highway 6 Hastings, NE 68901 402.463.1531 800.752.0888 402.463.1313 fax www.huskerpowerproducts.com | PITT AUTO ELECTRIC CO 1241 Freedom Road Cranberry Township, PA 16066 724.778.8200 800.245.0711 724.778.8206 fax www.pittauto.com info@pittauto.com | DIESELTECH 100 Otter Street Winnipeg, MB R3T 0M8 204.452.4334 800.665.7665 (Canada) 204.452.7984 fax www.dieselttech.mb.ca info@dieselttech.mb.ca | WESTQUIP DIESEL SALES (ALTA.) LTD 11720 - 181 Street Edmonton, AB T5S 1M6 780.486.2645 780.486.2676 fax gdumont@westquip.ca |
| | | ** Branch Office | |
| | | Pub # SL-4010-06 08/04 | |

AUTHORIZED ISUZU DISTRIBUTOR DIRECTORY

Isuzu Motors Limited - Worldwide Distributor Network

Asia / Pacific

| | | | |
|-------|--|--------|--|
| Japan | Isuzu Motors Limited 3-1, Kamigo, 4-Chome, Ebina Kanagawa-Ken, 243-0434, Japan (Non-Automotive Engines) Phone: 81-46-234-6180 Phone: 81-46-234-6093 | Tawain | Leanmark Co. 9F-1, No.201 Sec 2 Keelung Road, Taipei, Taiwan Fax: 1437-0308 |
|-------|--|--------|--|

Europe

| | | | |
|---------------------------|---|----------|--|
| Belgium / The Netherlands | DBH Rivierdijk 452, 3372 BW Hardinxveld-Giessendam The Netherlands Phone: +31 184 613066 Fax: +31 184 618002 | | Division of MACME Boomsesteenweg 42B B-2630 Aartselaar Phone: +32-3-870-8180 Fax: +32-3-870-8188 |
| Denmark | Holm-Denmark Sydvestvej 142-144 DK-2600 Glostrup Phone: +45-43-633700 Fax: +45-43-631403 | Finland | Finmotor Palvitie 3 FIN-01390 Vantaa Phone: +35-8987-00970 Fax: +35-8987-009770 |
| France | Penven 281, Chaussee Jules Cesar F-95250 Beauchamp Phone: 1-34135432 Fax: 1-39957659 | Germany | Lopke Diesel GmbH Ferdinand-Zeppelin-Strasse 19 47445 Moers Germany Phone: 0049 (0) 2841-99 90 445 Fax: 0049 (0) 2841-99 90 185 |
| Greece | Petros Petropoulos S.A. Lera Odos 96-102 P.O.B. 41018 12210 Athens Phone: 347-3300 Fax: 347-3404 | Italy | Pitteri Violini S.P.A. 20021 Baranzate de Bollate Milano, Via I Maggio, 25/57 Italy Phone: +39-02-382209-220 Fax: +39-02-3561674 |
| Norway | Diesel Power A/S Industriveien 7, P.O.B. 144 N-3430 Spikkostad Phone: 3129-1940 Fax: 3129-1958 | Portugal | Motolusa Estrada da Circunvalacao Portela da Ajuda P-1495 Lisboa Phone: 1214-241823 Fax: 1214-171927 |

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Isuzu Motors Limited - Worldwide Distributor Network

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| Spain | Transdiesel Div. de Casli, S.A. c/Viguetas Castilla, 26 E-28820 Coslada - Madrid Phone: 1-6737012 Fax: 1-6737412 | Automoviles Utilitarios, S.A. (AUSA) CRA.DE VIC, KM. 2,8 - P.O.B. 194 08240 Manresa, (Barcelona) Phone: 93-874 7311 Fax: 93-874 1211 |
| Sweden | Swed Motor AB Box 4 S-13721 Vasterhaninge Phone: 8-50012140 Fax: 8-50026800 | Switzerland Sterki AG Zinkereistrasse 35 CH-8633 Wolfhausen Phone: 55-253-2600 Fax: 55-253-2609 |
| United Kingdom | HM Isuzu Unit 5A, Babdown Airfield Nr Tetbury, Gloucestershire GL8 8YL United Kingdom Phone: 44+1666500843 Fax: 44+1666500844 - FAX | Isuzu Motors Europe Limited Suite 24, The Courtyards Croxley Business Park Hatters Lane, Watford Hertfordshire, WD1 8YH United Kingdom Phone: 1923-231-580 |

Middle East

| | | |
|------|--|--|
| Oman | General Engineering Service Est. C.R. 1/27447/3 P.O.B.5690 Ruwi, Sultanate Of Oman Fax: +968-591802 | U.A.E. General Navigation and Commerce Company Za'abeel Place Road P.O. Box 5563, Dubai Phone: +971-370065 Fax: +971-370308 |
|------|--|--|

Oceania

| | | |
|-----------|---|--|
| Australia | Isuzu Australia Limited Building 1, Brooklyn Estate 77 Millers Road Brooklyn, Victoria 3025 Australia Phone: 61 3 9931 9977 Fax: 61 3 9315 2370 | New Zealand Holden New Zealand Limited Plant No.1, Private Bag Upper Hut Phone: 4-528-1200 Fax: 4-528-1125 |
|-----------|---|--|



SERVICE & PARTS BULLETIN

SVS-21-07
8/9/2007

TO: ALL DISTRIBUTOR & DEALER SERVICE PERSONNEL

SUBJECT: J-SERIES ENGINE OIL FILL PROCEDURES

BACKGROUND INFORMATION

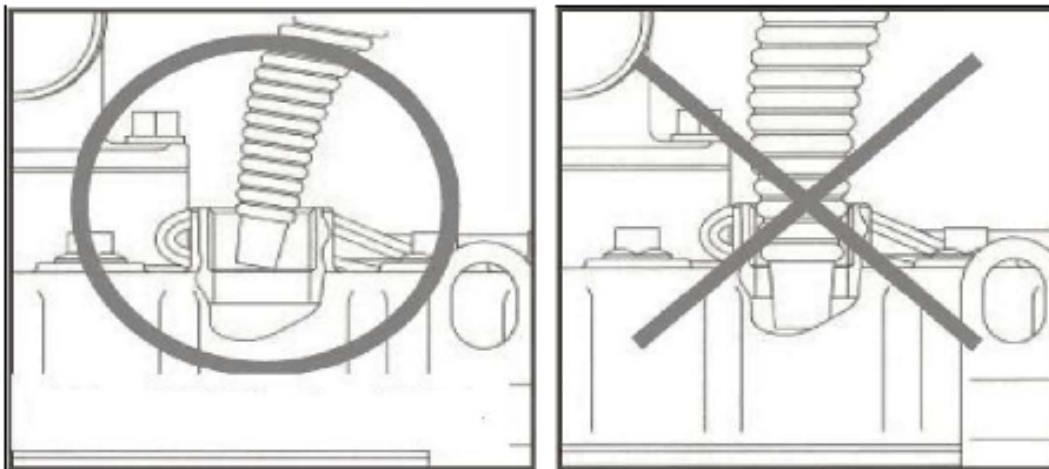
Improper engine oil fill rate and crankcase venting while filling may allow oil to enter the crank case ventilation system, intake manifold and combustion chamber, which may cause engine damage at startup.

ACTION REQUIRED

Follow the Oil Fill Procedure provided below, or refer to the appropriate engine Instruction Manual to prevent this non warrantable failure mode.

OIL FILL PROCEDURE

1. Before adding engine oil, remove the engine oil dipstick to provide crankcase ventilation.



2. Use an engine oil fill device that is smaller than the oil fill hole so that air is allowed to pass along the side of the oil fill hole.
3. Add engine oil slowly, at a rate that does not flood the valve cover. Be very careful when using automatic oil fill pumps; adjust to a slow rate if possible.
4. When changing the engine oil, add the exact amount specified in the manual.
5. Allow 10-20 minutes for the oil to drain into the oil pan. Confirm this by checking the oil level with the dip stick (repeatedly) until it stabilizes.



SERVICE & PARTS BULLETIN

6. Check if the oil level is low, accounting for the oil filter oil capacity.
7. If the oil is low, oil may have entered the Closed Crankcase Ventilation (CCV) system and into the intake manifold and cylinder. If so, the oil must be removed before cranking the engine.

PROCEDURE FOR EVACUATING OIL FROM THE CCV SYSTEM

1. If oil entered the CCV system, it may be found in the intake manifold. Remove the intake manifold for verification.
2. Oil that has entered the CCV system can be removed from the cylinders by removing all fuel injection nozzles and turning the engine with the starter until all oil is exhausted from the cylinders.

If you should have any questions please contact your service and parts representative.

Best Regards,

The ISZAPT Service & Parts Team

WARNING – DO NOT USE JET A FUEL IN THIS ENGINE. ANY USE OF JET A FUEL WILL VOID THE WARRANTY ON THE ENGINE AND WILL RESULT IN VIOLATION OF EPA EMISSIONS REGULATIONS

NOTES:

SERVICE PARTS ILLUSTRATIONS & DETAIL

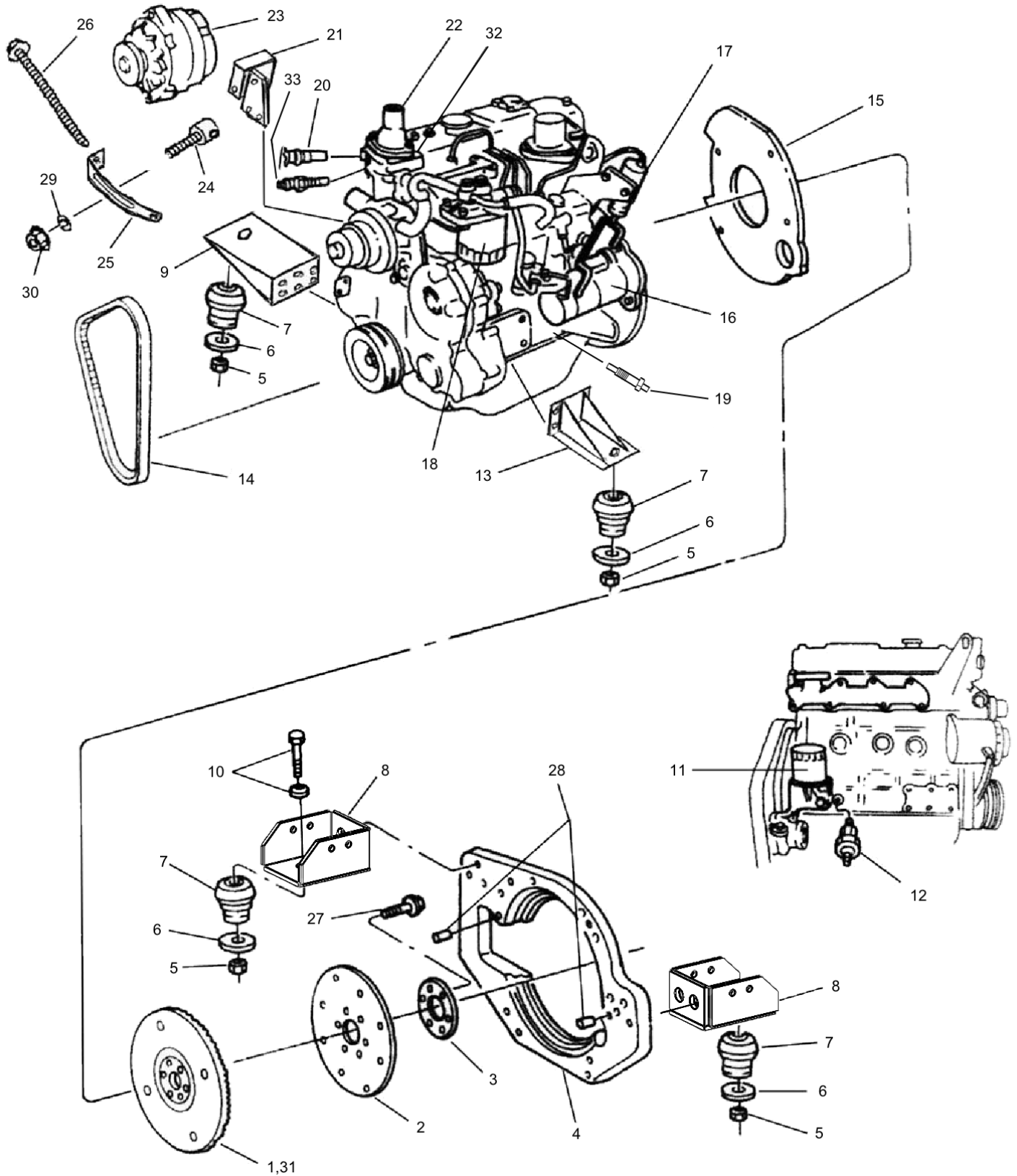
IDENTIFICATION KEY

The following abbreviations are used throughout the parts lists in this section.

| Abbreviation | Meaning | Purpose |
|--------------|----------------|---|
| NL | Not Listed | Part required but not shown on diagram |
| NPN | No Part Number | Parts shown and numbered, but not stocked and sold by Eagle. Typically used for bolts, clamps, etc... |
| AR | As required | |

POWER TRAIN

ENGINE DRESS—ISUZU DIESEL



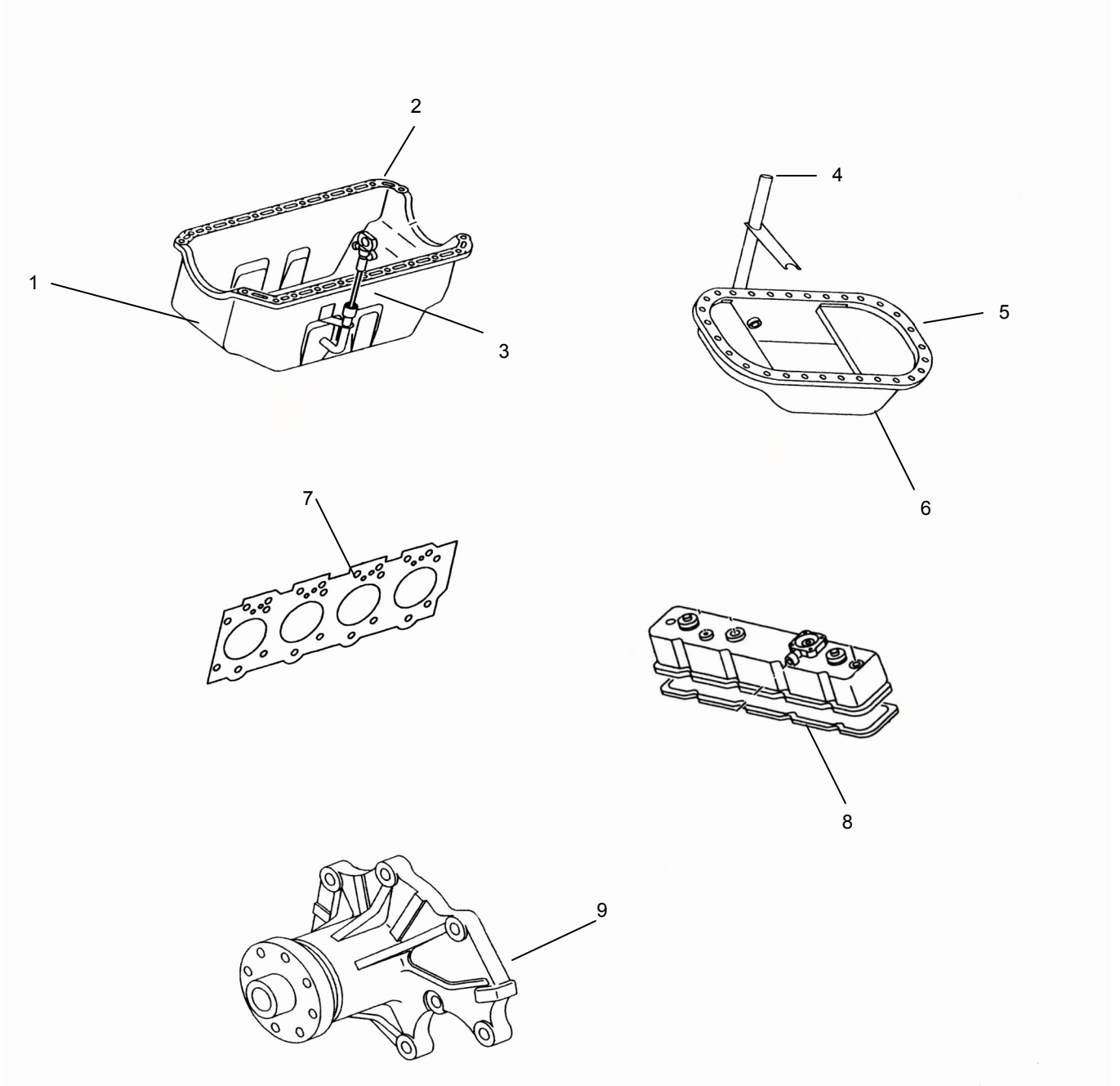
POWER TRAIN

ENGINE DRESS—ISUZU DIESEL—DETAIL

| Item | Part Number | Qty | Description |
|------|-------------------|-----|---------------------------------------|
| 1 | B-TT10TD-00017-1 | 1 | FLYWHEEL (RING GEAR NOT INCLUDED) |
| 2 | B-TT10TD-00016-ID | 1 | FLEX PLATE |
| 3 | TM27C00305-ID | 1 | FLEX PLATE WASHER |
| 4 | B-TT10TD-00001-ID | 1 | TRANS PLATE |
| 5 | NPN | 4 | 3/4 LOCK NUT |
| 6 | A-TT5D-00010 | 4 | LORD WASHER |
| 7 | A-TT5D-00013-1 | 4 | ISOLATOR |
| 8 | A-TT4-00011 | 2 | ENGINE MOUNT - TRANS PLATE |
| 9 | B-TT5D-00008 | 1 | ENGINE MOUNT LEFT SIDE |
| 10 | NPN | 4 | 3/4-16X3.5 BOLT & 3/4 WASHER |
| 11 | 8-94430-983-1 | 1 | OIL FILTER ELEMENT |
| 12 | A-TT4-00651 | 1 | OIL PRESSURE SENDING UNIT |
| 13 | 8971138000 | 1 | ISUZU MOTOR MOUNT |
| 14 | 1136714360 | 1 | BELT |
| 15 | TMD27B00521-ID | 1 | ENGINE PLATE |
| 16 | 8970848770 | 1 | STARTER |
| 17 | X143301540 | 1 | SOLENOID (REQ ON 4JB1 ENG ONLY) |
| 18 | 8-94414-796-3 | 1 | FUEL FILTER ELEMENT (4JBI ENGINE) |
| 18A | 897213-4720 | 1 | FUEL FILTER ELEMENT (4JGI ENGINE) |
| 19 | A-TT4-00652 | 1 | COOLANT TEMP SENDING UNIT |
| 20 | A-TT4-00653-1 | 1 | FAN SWITCH |
| 21 | A-TT4-00143E | 1 | ALTERNATOR BRACKET |
| 22 | 897217-8270 | 1 | THERMOSTAT HOUSING STRIGHT |
| 22 | 897207-2321 | 1 | THERMOSTAT HOUSING 90 DEG (NOT SHOWN) |
| NL | 8970908790 | 1 | THERMOSTAT HOUSING GASKET |
| 23 | 8970784710 | 1 | ALTERNATOR |
| 24 | 8970862281 | 1 | SLIDING ADJUSTMENT BOLT |
| 25 | 8971842640 | 1 | ALTERNATOR ADJUSTING BRACKET |
| 26 | 8943881780 | 1 | BOLT, ALT |
| 27 | 13MM-ID | 8 | M-13 BOLTS |
| 28 | 5240849 | 2 | DOWEL PINS |
| 29 | 1099851770 | 1 | LOCK WASHER, ALT |
| 30 | 9091105080 | 1 | NUT, ALT |
| 31 | 8949196021 | 1 | RING GEAR |
| 32 | 8970186640 | 1 | THERMOSTAT HOUSING |
| 33 | A51210 | 1 | SHUTDOWN TEMP SENDER |
| NL | 8943825460 | 1 | THERMOSTAT (4JB1 ENGINE) |
| NL | 894365-6741 | 1 | THERMOSTAT GASKET (4JB1 ENGINE) |
| NL | 8972112090 | 1 | THERMOSTAT (4JGI ENGINE) |
| NL | 8943656742 | 1 | THERMOSTAT GASKET (4JGI ENGINE) |

POWER TRAIN

ENGINE DRESS—ISUZU DIESEL



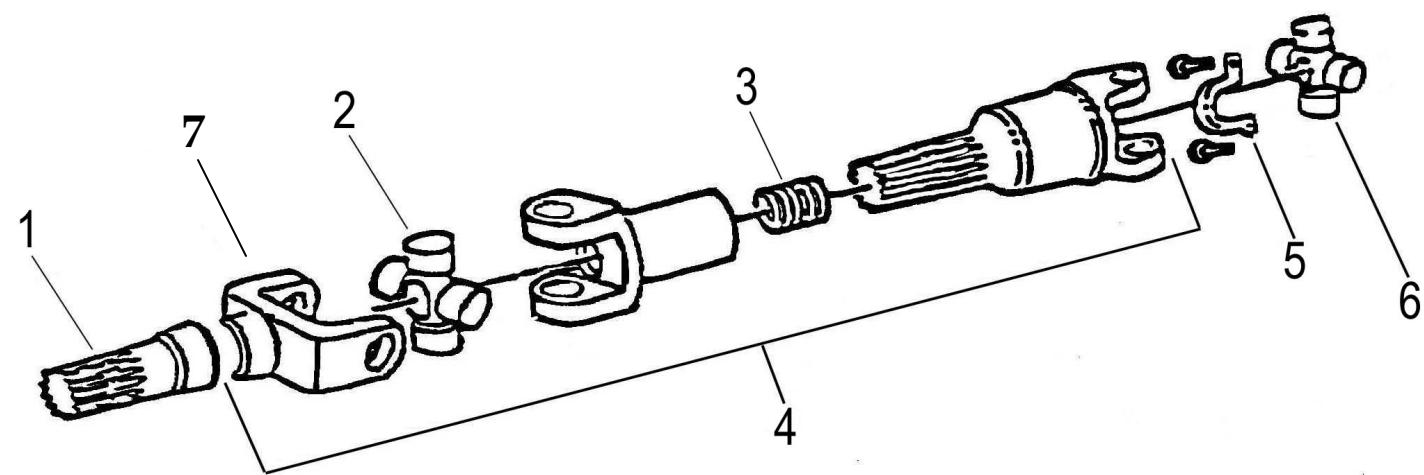
POWER TRAIN

ENGINE DRESS—ISUZU DIESEL—DETAIL

| Item | Part Number | Qty | Description |
|------|-------------|-----|------------------------------------|
| 1 | 8972539850 | 1 | OIL PAN (4JG1 ENGINE) |
| 2 | 8970801940 | 1 | OIL PAN GASKET(4JG1 ENGINE) |
| 3 | 8970479310 | 1 | DIP STICK (4JG1 ENGINE) |
| 4 | 8970479310 | 1 | DIP STICK (4JB1 ENGINE) |
| 5 | 8970453220 | 1 | OIL PAN GASKET(4JB1 ENGINE) |
| 6 | 8971738660 | 1 | OIL PAN (4JB1 ENGINE) |
| 7 | 8970661980 | 1 | CYLINDER HEAD GASKET (4JG1 ENGINE) |
| 7 | 8943323270 | 1 | CYLINDER HEAD GASKET (4JB1 ENGINE) |
| 8 | 8973494160 | 1 | HEAD COVER GASKET (4JG1 ENGINE) |
| 8 | 8971187680 | 1 | HEAD COVER GASKET (4JB1 ENGINE) |
| 9 | 8971050123 | 1 | WATER PUMP (4JG1 ENGINE) |
| 9 | 8970285901 | 1 | WATER PUMP (4JB1 ENGINE) |
| 10 | 5878136190 | 1 | GASKET SET ENGINE OVERHAUL(4JB1) |
| 11 | 5878133946 | 1 | GASKET SET ENG HEAD OVERHAUL(4JB1) |
| 12 | 5878142701 | 1 | GASKET SET ENGINE OVERHAUL(4JG1) |

DRIVELINE

DRIVE SHAFT ASSEMBLY—FRONT

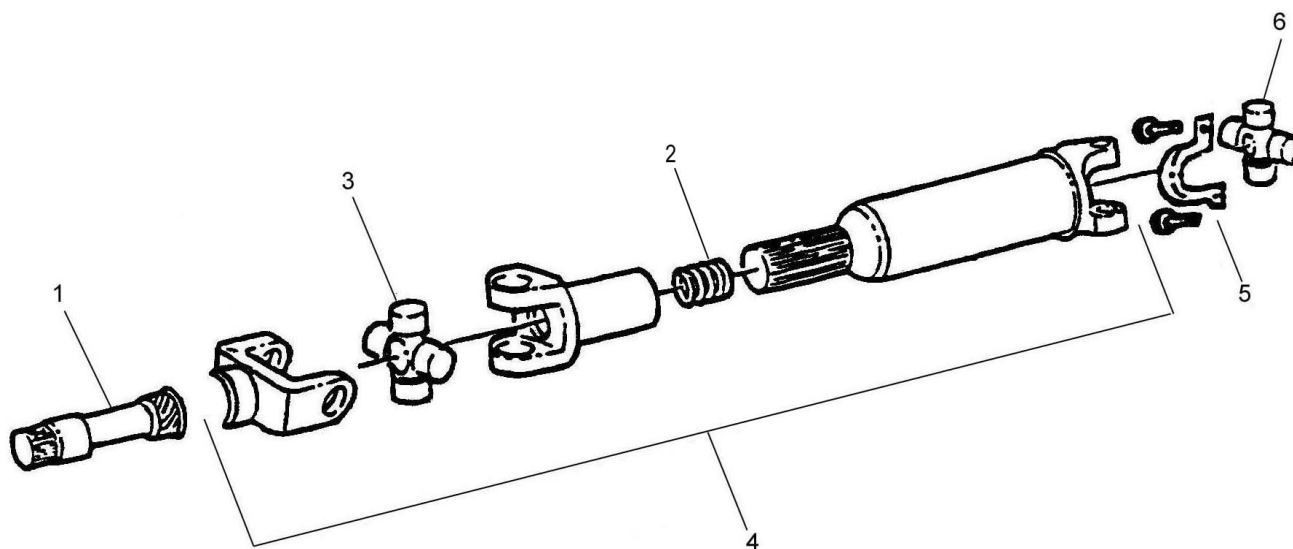


DRIVE SHAFT ASSEMBLY— FRONT DETAIL

| ITEM | PART NUMBER | QTY. | DESCRIPTION |
|------|---------------|------|--------------------------------------|
| 1 | A-TT8-00201-1 | 1 | TRANSMISSION OUTPUT YOKE SHAFT-FRONT |
| 2 | A-TT4-00132-1 | 1 | CROSS BEARING FRONT D/S NEW STYLE |
| 3 | A-TT4-00134 | 1 | DRIVE SHAFT SPRING |
| 4 | A-TT8-00202-4 | 1 | DRIVE SHAFT |
| 5 | A-TT4-00130 | 2 | END YOKE STRAP AND BOLT KIT |
| 6 | A-TT4-00137-1 | 1 | CROSS BEARING FRONT D/S NEW STYLE |
| 7 | 2-4-1921 | 1 | END YOKE |

DRIVELINE

DRIVESHAFT ASSEMBLY—REAR

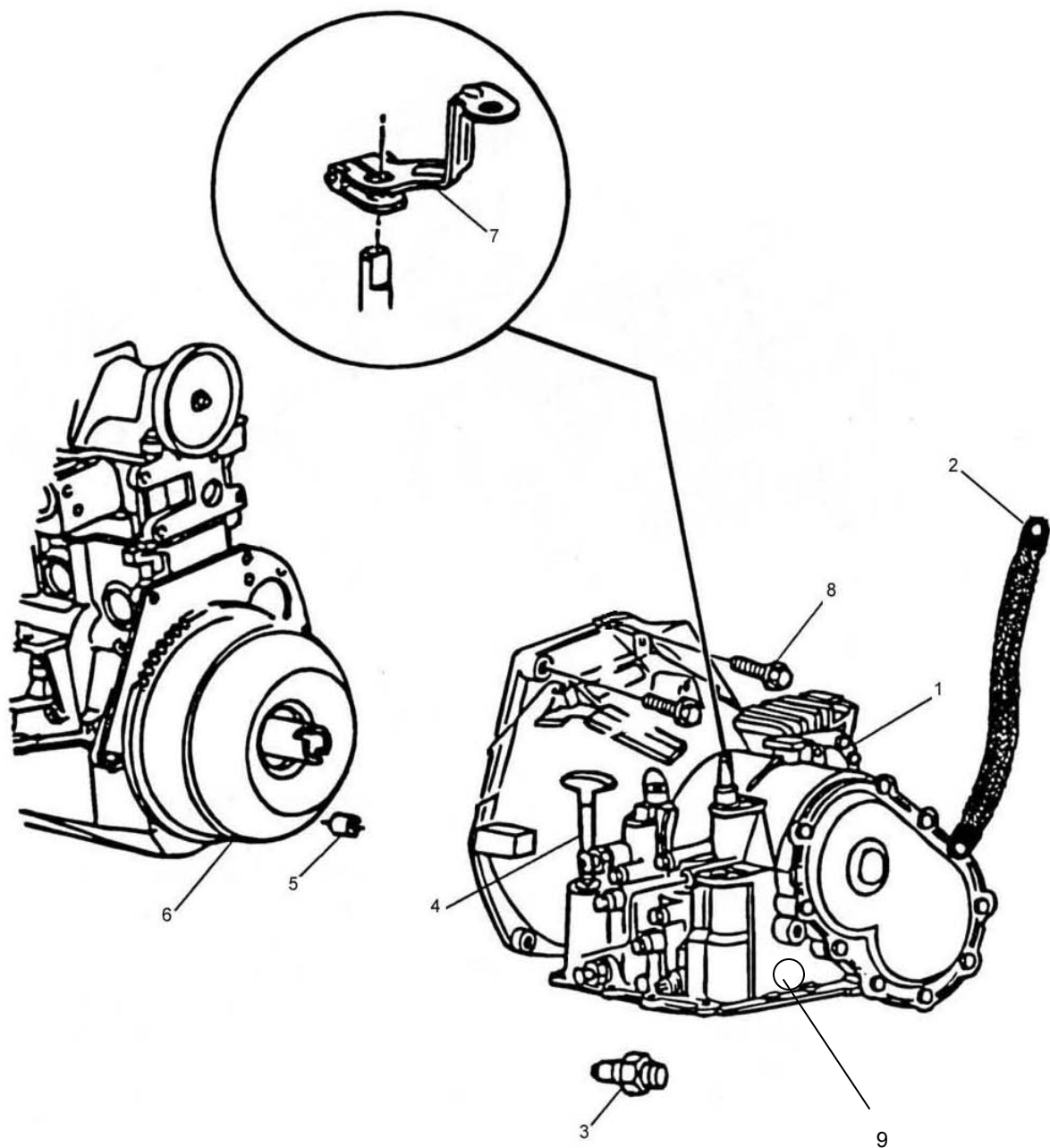


DRIVE SHAFT ASSEMBLY—REAR DETAIL

| ITEM | PART NUMBER | QTY. | DESCRIPTION |
|------|----------------|------|-------------------------------------|
| 1 | A-TT8-00201-2 | 1 | TRANSMISSION OUTPUT YOKE SHAFT-REAR |
| 2 | A-TT4-00134 | 1 | DRIVE SHAFT SPRING |
| 3 | A-TT4-00132-1 | 1 | CROSS BEARING FRONT D/S NEW STYLE |
| 4 | AB-TT4-00130-1 | 1 | DRIVE SHAFT |
| 5 | A-TT4-00130 | 2 | END YOKE STRAP KIT |
| 6 | A-TT4-00137 | 1 | CROSS BEARING REAR D/S NEW STYLE |

TRANSMISSION

TRANSAXLE MOUNTING & MISC. PARTS



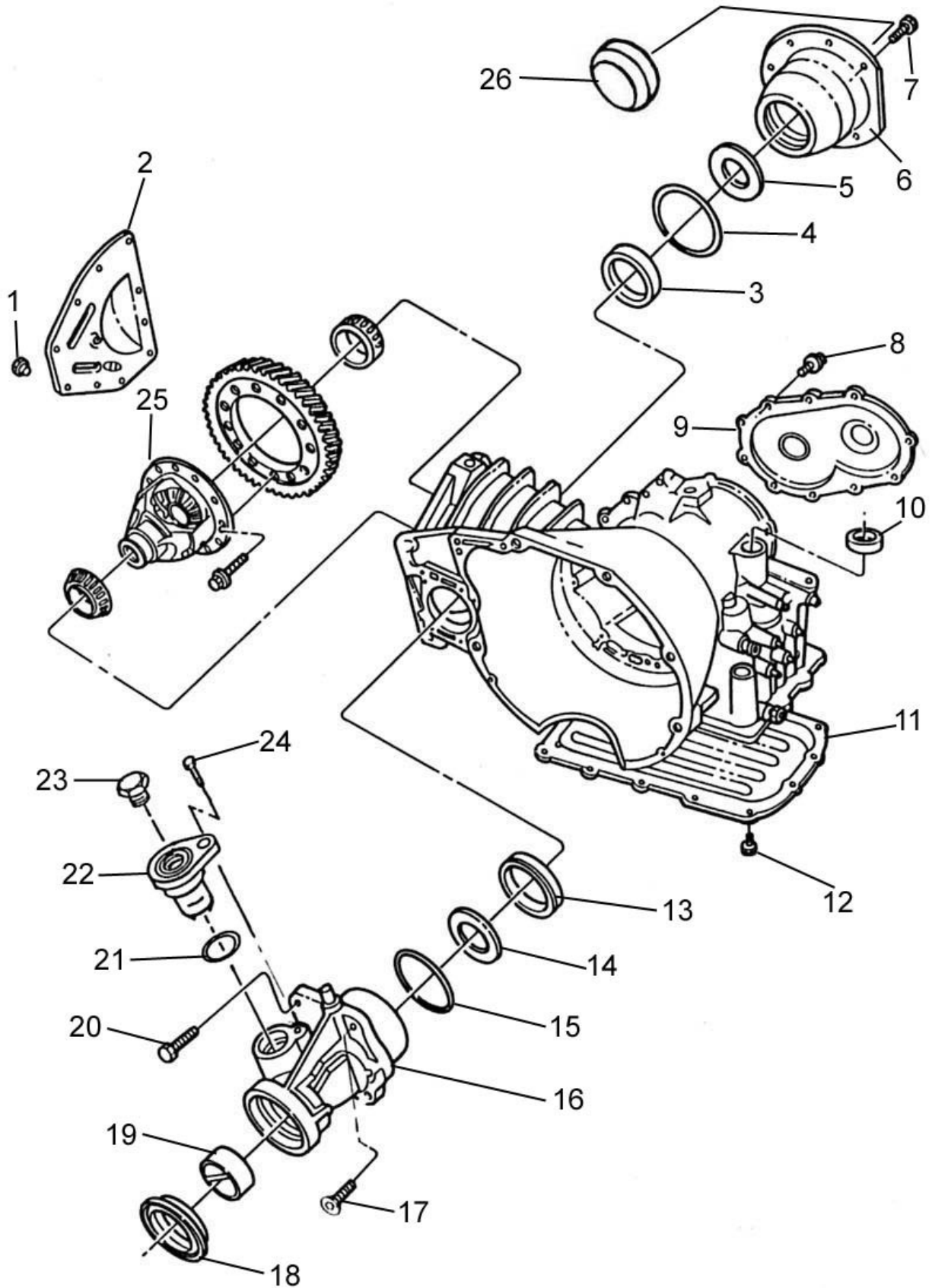
TRANSMISSION

TRANSAXLE MOUNTING & MISC. PARTS DETAIL

| ITEM | PART NUMBER | QTY. | DESCRIPTION |
|------|-------------|------|---|
| 1 | A-TT5D-0018 | 1 | TRANSAXLE |
| 2 | A-TN4-00707 | 1 | GROUND STRAP |
| 3 | 3747361 | 1 | SWITCH-NEUTRAL STARTER & BACK UP LIGHT |
| 4 | 4856444 | 1 | INDICATOR-TRANSAXLE FLUID |
| 5 | 5240849 | 2 | DOWEL PIN-TRANSAXLE TO ENGINE ALIGNMENT |
| 6 | 4778718 | 1 | TORQUE CONVERTER |
| 7 | A-TT4-00419 | 1 | TRANSAXLE SHIFT LEVER-MANUAL CONTROL |
| 8 | 6501741 | 2 | SCREW-HEX CAP-WITH WASHER M12-1.75 X 30 |
| 9 | 85705 | 1 | GASKET & FILTER MAINTENANCE PACKAGE |

TRANSMISSION

TRANSAXLE CASE EXTENTION & RETAINER



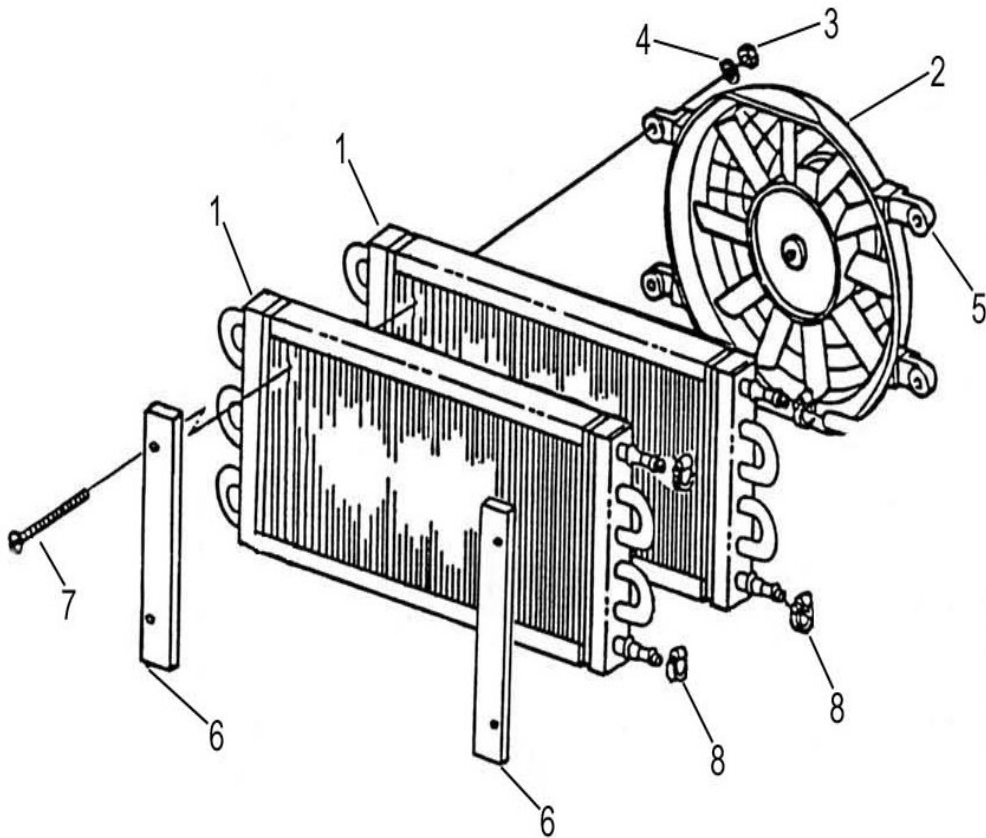
TRANSMISSION

TRANSAXLE CASE EXTENTION & RETAINER - DETAIL

| Item | Part Number | Qty | Description |
|------|--------------|-----|--------------------------------------|
| 1 | 6501474 | 10 | SCREW-HEX CAP-W/WASHER M8-1.25 X 16 |
| 2 | 4471573 | 1 | PAN |
| 3 | NPN | 1 | CUP(NOT SOLD SEPARATELY) |
| 4 | 4504568 | 1 | SPACER KIT |
| 5 | 4269787 | 1 | RETAINER, OIL |
| 6 | 4567493 | 1 | RETAINER, BEARING |
| | 6500368 | 6 | SCREW-HEX CAP-M8 X 1.25 X 23 |
| 7 | NPN | 6 | SCREW-HEX CAP-WASHER HEAD M8-1.25 X |
| 8 | NPN | 10 | SCREW-HEX CAP M8-1.25 X 15 |
| 9 | 4659342 | 1 | COVER, TRANS. END |
| | 82180 | 1 | RTV SEALANT |
| | 6501474 | 10 | SCREW-HEX CAP W/WASHER M8-1.25 X 16 |
| 10 | 3878447 | 1 | SEAL, MANUAL VALVE SHAFT |
| 11 | 4471573 | 1 | PAN, TRANSAXLE OIL |
| 12 | 6501474 | 12 | SCREW-HEX CAP W/WASHER M8-1.25 X 16 |
| | 6101285 | 1 | SCREW-HEX CAP-W/WASHER M6-1 X 16 |
| 13 | 4567022 | 1 | CUP |
| 14 | 4567494 | 1 | RETAINER |
| 15 | 6500111 | 1 | O-RING |
| 16 | 4549219 | 1 | OUTPUT HOUSING |
| | 6500511 | 4 | SCREW-HEX CAP-W/WASHER M8-1.25 X 33 |
| 17 | NPN | 2 | M8 HEX HEAD SCREW |
| 18 | 4412522 | 1 | SEAL |
| 19 | NPN | 1 | BUSHING (SERVICED IN EXT.) |
| 20 | NPN | 4 | SCREW-HEX CAP WASHER HEAD M8-1.25 X |
| 21 | 5212151 | 1 | O-RING |
| 22 | 4295857 | 1 | SPEEDOMETER CABLE ADAPTOR |
| 23 | NPN | 1 | SCREW-FLAT HEAD HEX SOCKET M8-1.25 X |
| 24 | NPN | 1 | SCREW-HEX CAP-WASHER HEAD M6-1.0 X |
| 25 | A-TT5D-00021 | 1 | DIFFERENTIAL-WELDED SPIDER GEAR |
| 26 | A-TT4-00657 | 1 | TRANSMISSION PLUG (2WD ONLY) |

TRANSMISSION

COOLING SYSTEM— TRANSMISSION

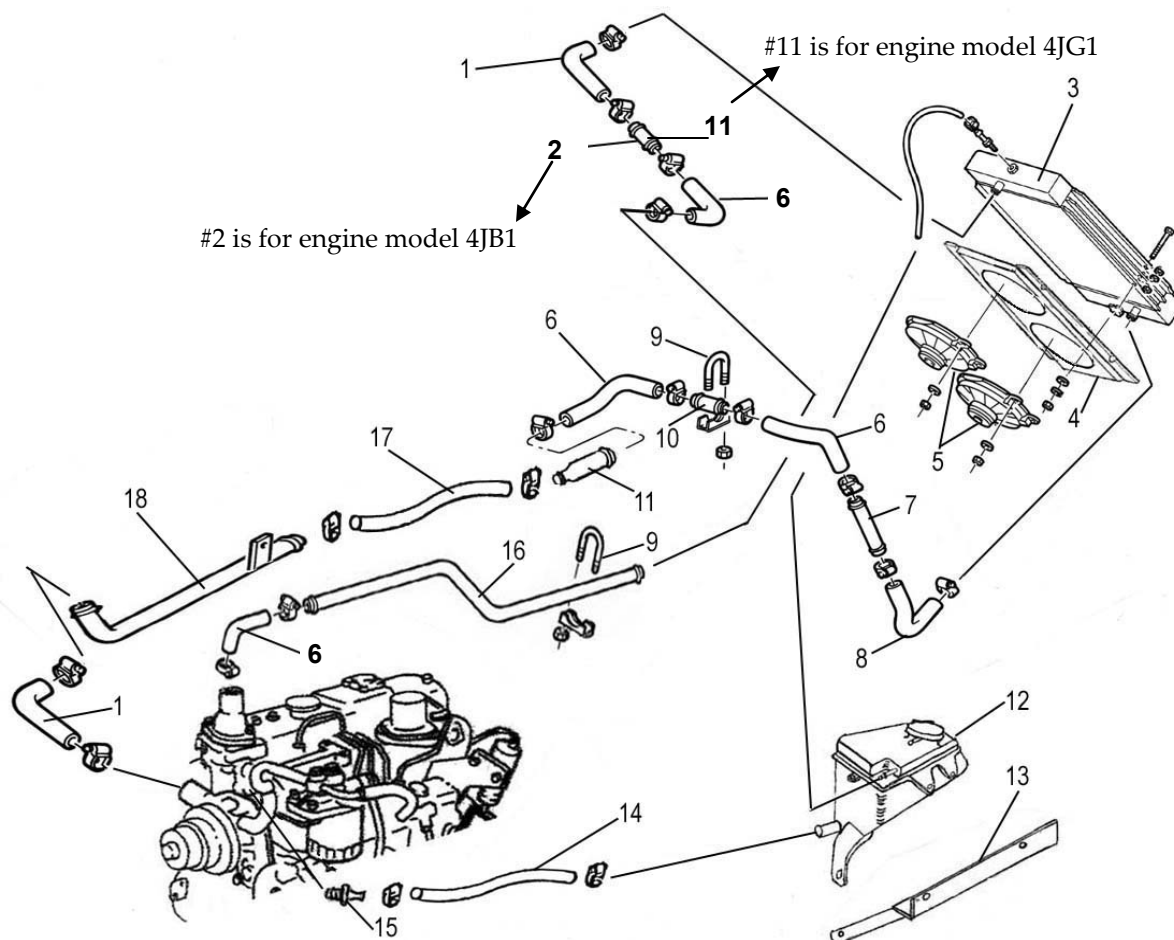


COOLING SYSTEM—TRANSMISSION DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|----------------------|
| 1 | A-TT4-00221-1 | 2 | TRANSMISSION COOLER |
| 2 | A-TT4-00312-1 | 1 | ELECTRIC FAN |
| 3 | NPN | 4 | 10-32 LOCK NUT |
| 4 | NPN | 4 | 1/4" WASHER |
| 5 | XX50025 | 4 | FAN MOUNTING BRACKET |
| 6 | NPN | 2 | TRANS COOLER BRACKET |
| 7 | NPN | 4 | 10-32 BOLT |
| 8 | NPN | 4 | #6 HOSE CLAMP |

COOLING SYSTEM

COOLING SYSTEM—4JG1 & 4JB1 ENGINE MODELS ONLY

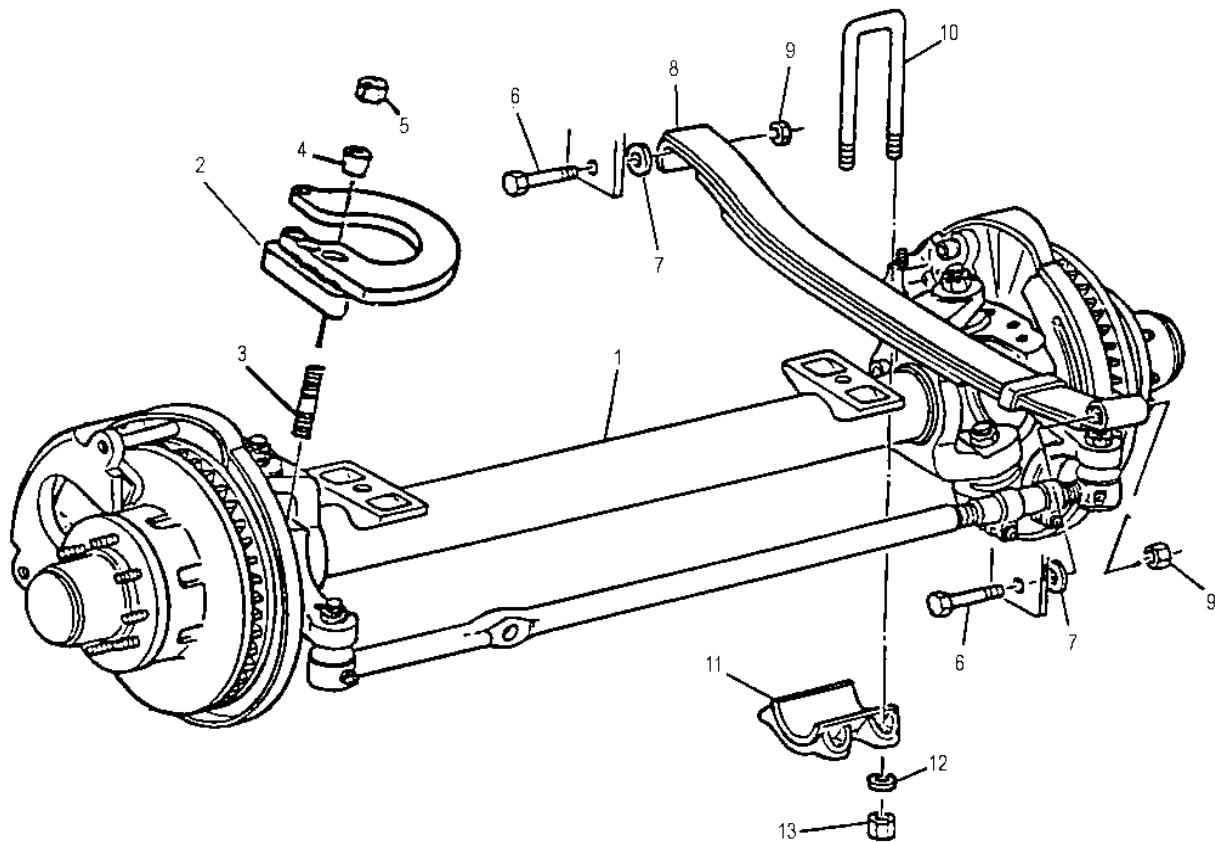


COOLING SYSTEM—DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|-----------------------------------|
| 1 | A-TT4-00317 | 2 | 90 DEGREE HOSE |
| 2 | NPN | 1 | CONNECTOR TUBE (4JB1 Engine Only) |
| 3 | B-TT4-00311-1 | 1 | RADIATOR |
| 4 | A-TT8-00341 | 1 | RADIATOR SHROUD |
| 5 | A-TT4-00312-1 | 2 | COOLING FAN |
| 6 | A-TT4-00323 | 4 | BOTTOM HOSE (CUT TO FIT) |
| 7 | A-TN4-00314 | 1 | CONNECTOR TUBE |
| 8 | A-TT4-00314 | 1 | BOTTOM RADIATOR HOSE |
| 9 | A-TT4-00396 | 2 | U-BOLT |
| 10 | A-TT8D-00200 | 1 | CONNECTOR TUBE |
| 11 | A-TT8D-00100 | 2 | TUBE CONNECTOR (4JG1 ENGINE ONLY) |
| 12 | A-TT4-00322-2 | 1 | RESERVOIR FILL TANK |
| 13 | NPN | 1 | RESERVOIR BRACKET |
| 14 | NPN | 1 | CUT TO FIT, BULK HOSE |
| 15 | 057123-108 | 1 | FITTING |
| 16 | A-TT4F-00326 | 1 | TOP RADIATOR TUBE |
| 17 | NPN | 1 | CUT TO FIT, BULK HOSE |
| 18 | A-TT4-00326-3 | 1 | WATER PUMP TUBE |

AXLES

AXLE ASSEMBLY – FRONT NON-DRIVE TT4-TT6 2WD ONLY



AXLE ASSEMBLY – FRONT NON-DRIVE – DETAIL

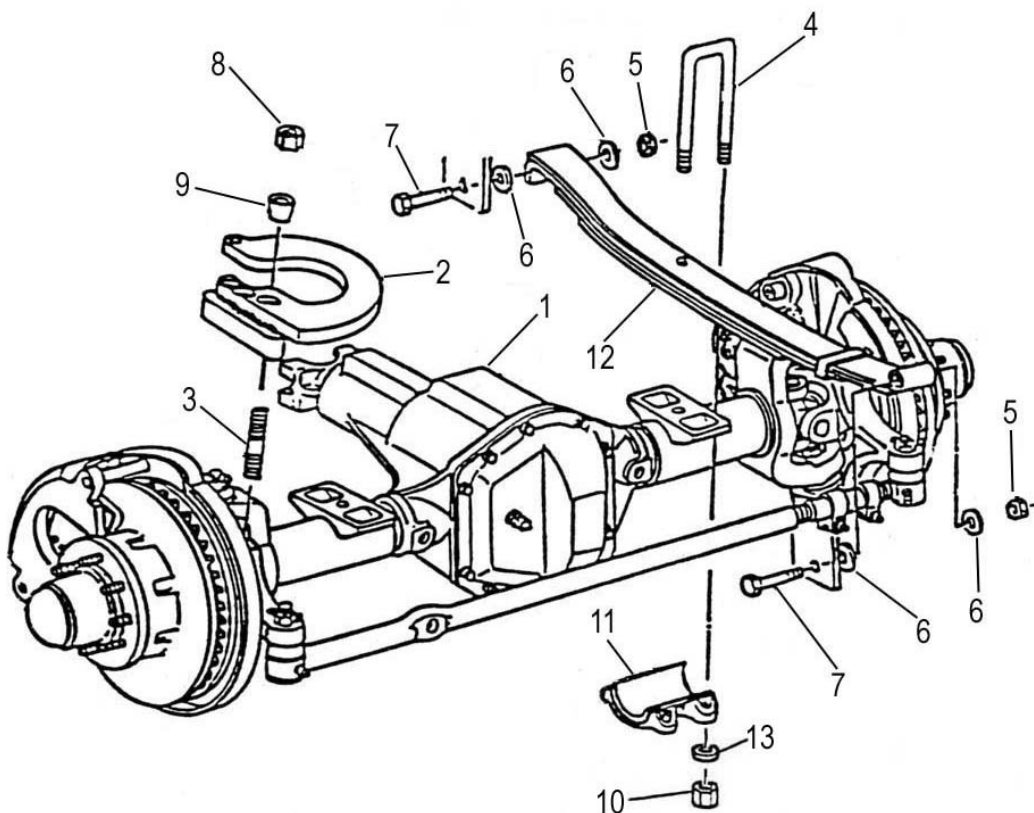
| Item | Part Number | Qty | Description |
|------|--------------------|-----|----------------------------|
| 1 | A-TT4-00111 | 1 | AXLE ASSAY-FRONT NON-DRIVE |
| 2 | C-TT4-00113-1-MACH | 1 | STEERING ARM - TT4-6 2WD |
| 3 | A-TT8-00115 | 3 | STUD-STEERING ARM |
| 4 | 3965138 | 3 | BUSHING |
| 5 | NPN | 3 | 9/16-18 GR8 HEX NUT |
| 6 | NPN | 4 | SCREW-HEX CAP 3/8-16X3.5 |
| 7 | A-TT4-00119 | 12 | NYLON WASHER |
| 8 | A-TT4-00116 | 2 | LEAF SPRING |
| 9 | NPN | 8 | 3/8-16 LOCK NUT |
| 10 | A-TT4-00362-1 | 4 | U-BOLT KIT |
| 11 | A-TT4-00363* | 2 | AXLE CLAMP PLATE* |
| 12 | A-TT4-00366** | 8 | WASHER, U-BOLT |
| 13 | A-TT4-00365** | 8 | NUT, U-BOLT |
| 14 | NPN | 2 | 3/8 FLAT WASHER |

* AXLE CLAMP MUST BE MODIFIED - CALL EAGLE PARTS DEPARTMENT FOR DETAILS

**INCLUDED IN #10 U-BOLT KIT

AXLES

AXLE ASSEMBLY—FRONT DRIVE (ALL WHEEL DRIVE)



AXLE ASSEMBLY—FRONT DRIVE—DETAIL

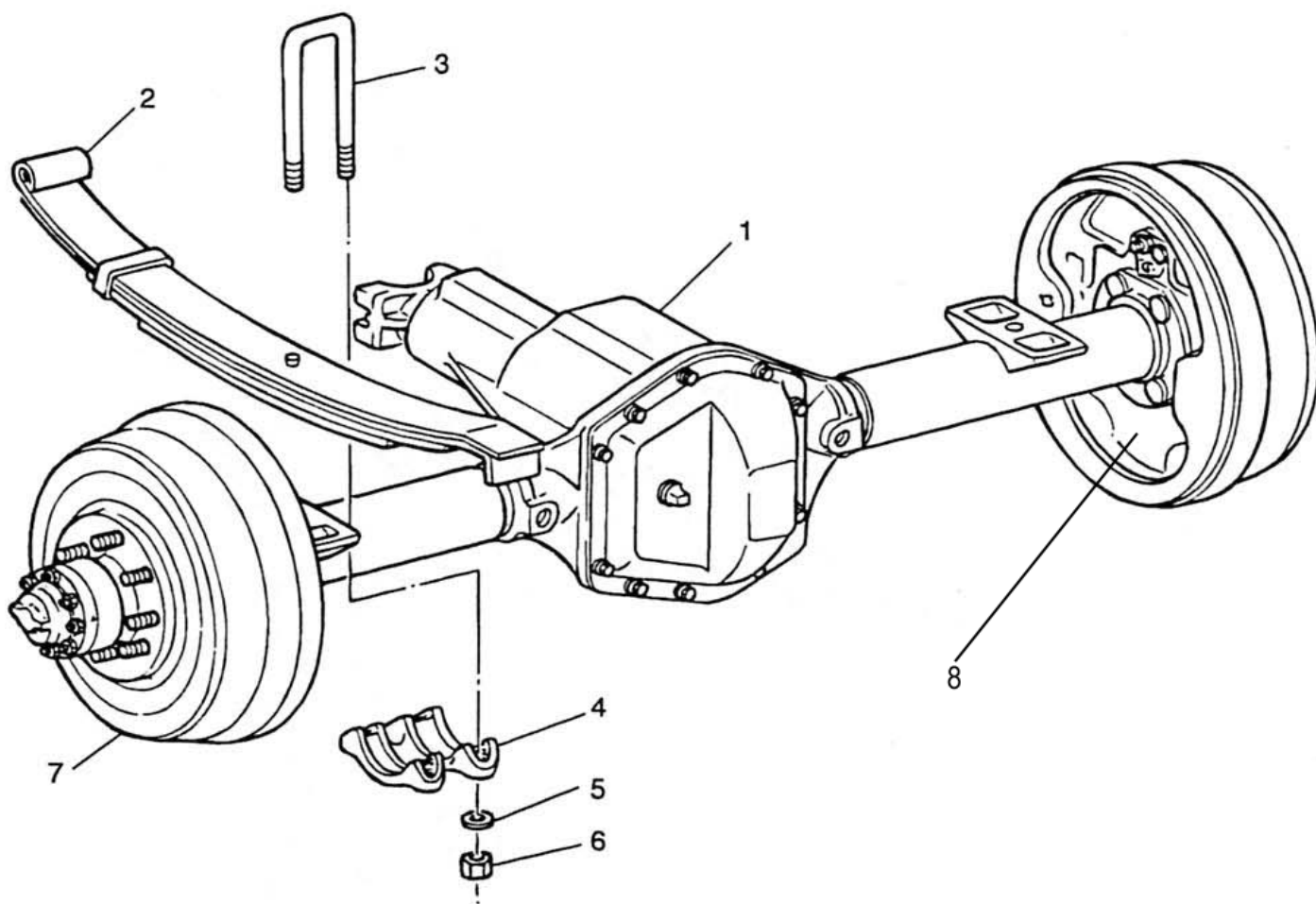
| ITEM | PART NUMBER | QTY. | DESCRIPTION |
|------|--------------------|------|------------------------------|
| 1 | A-TT8-00371 | 1 | FRONT DRIVE AXLE ASSEMBLY |
| 2 | C-TT4-00113-2-MACH | 1 | STEERING ARM - TT4-TT8/2 AWD |
| 3 | A-TT8-00115 | 3 | STUD - STEERING ARM |
| 4 | A-TT4-00362-1 | 4 | KIT |
| 5 | NPN | 4 | 3/8X16 LOCK NUT |
| 6 | A-TT4-00119 | 8 | NYLON WASHER |
| 7 | NPN | 4 | SCREW-HEX CAP 3/8-16X3.5 |
| 8 | NPN | 3 | NUT 9/16-18 GR8 |
| 9 | 3965138 | 3 | BUSHING |
| 10 | A-TT4-00365* | 8 | NUT, U-BOLT |
| 11 | A-TT4-00118-3 | 2 | MACHINED AXLE CLAMP PLATE |
| 12 | A-TT4-00116 | 2 | LEAF SPRING |
| 13 | A-TT4-00366* | 8 | WASHER, U-BOLT |

* INCLUDED IN #4 U-BOLT KIT

NOTES:

AXLES

AXLE ASSEMBLY— REAR



AXLE ASSEMBLY—REAR—DETAIL

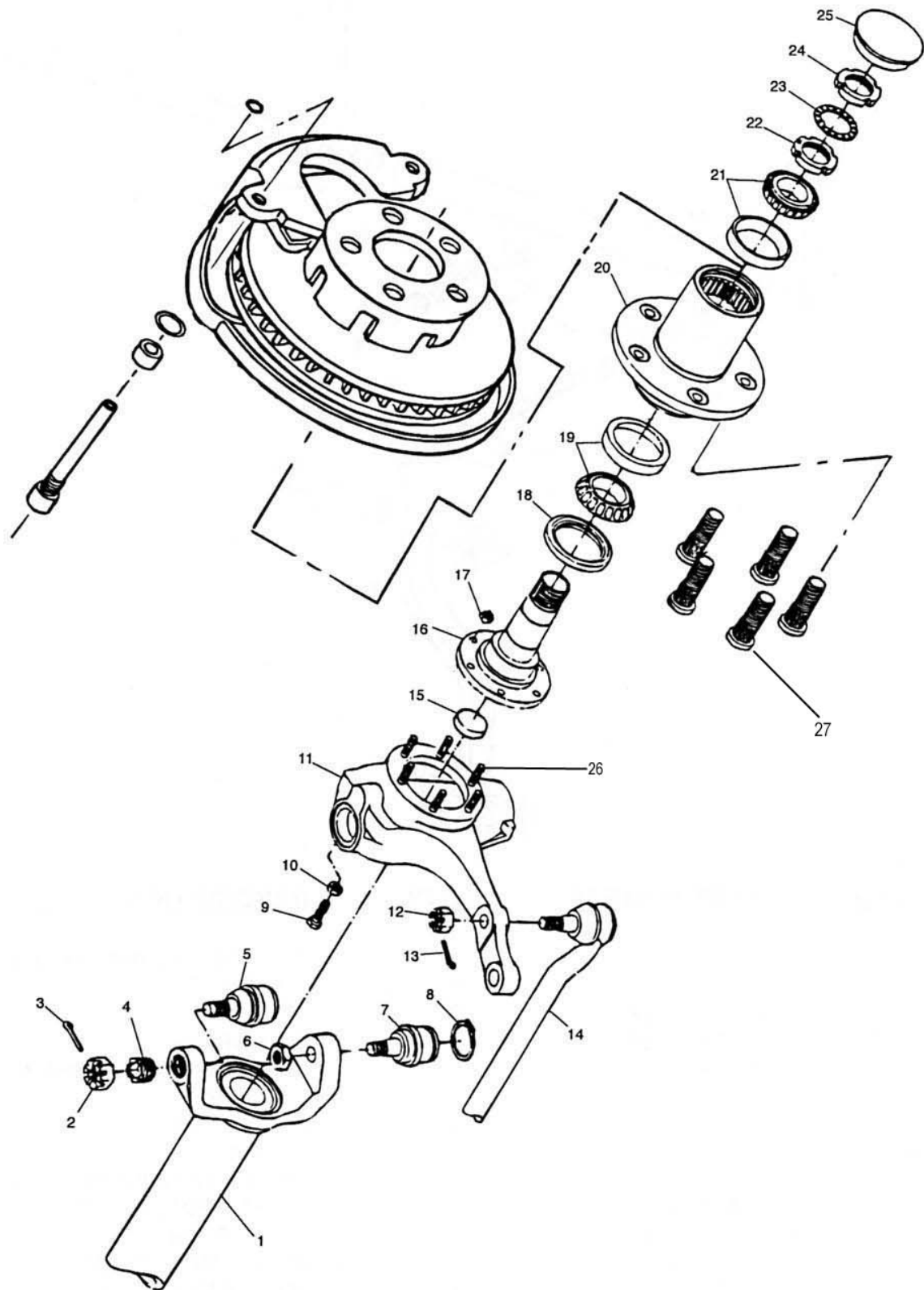
| ITEM | PART NUMBER | QTY | DESCRIPTION |
|------|---------------|-----|--------------------------|
| 1 | A-TT4-00361** | 1 | REAR AXLE ASSEMBLY |
| 2 | A-TT4-00116 | 2 | LEAF SPRING |
| 3 | A-TT4-00362-1 | 4 | U-BOLT KIT |
| 4 | A-TT4-00363 | 2 | AXLE CLAMP PLATE |
| 5 | A-TT4-00366* | 8 | WASHER |
| 6 | A-TT4-00365* | 8 | NUT |
| 7 | 4313905 | 1 | LEFT HAND BACKING PLATE |
| 8 | 4313904 | 1 | RIGHT HAND BACKING PLATE |

*INCLUDED IN KIT ITEM #3

**CALL EAGLE TUGS FOR INFORMATION IF YOUR TUG IS EQUIPPED WITH LIMITED SLIP

AXLES

AXLE ASSEMBLY BREAKDOWN— FRONT NON-DRIVE (2WD)



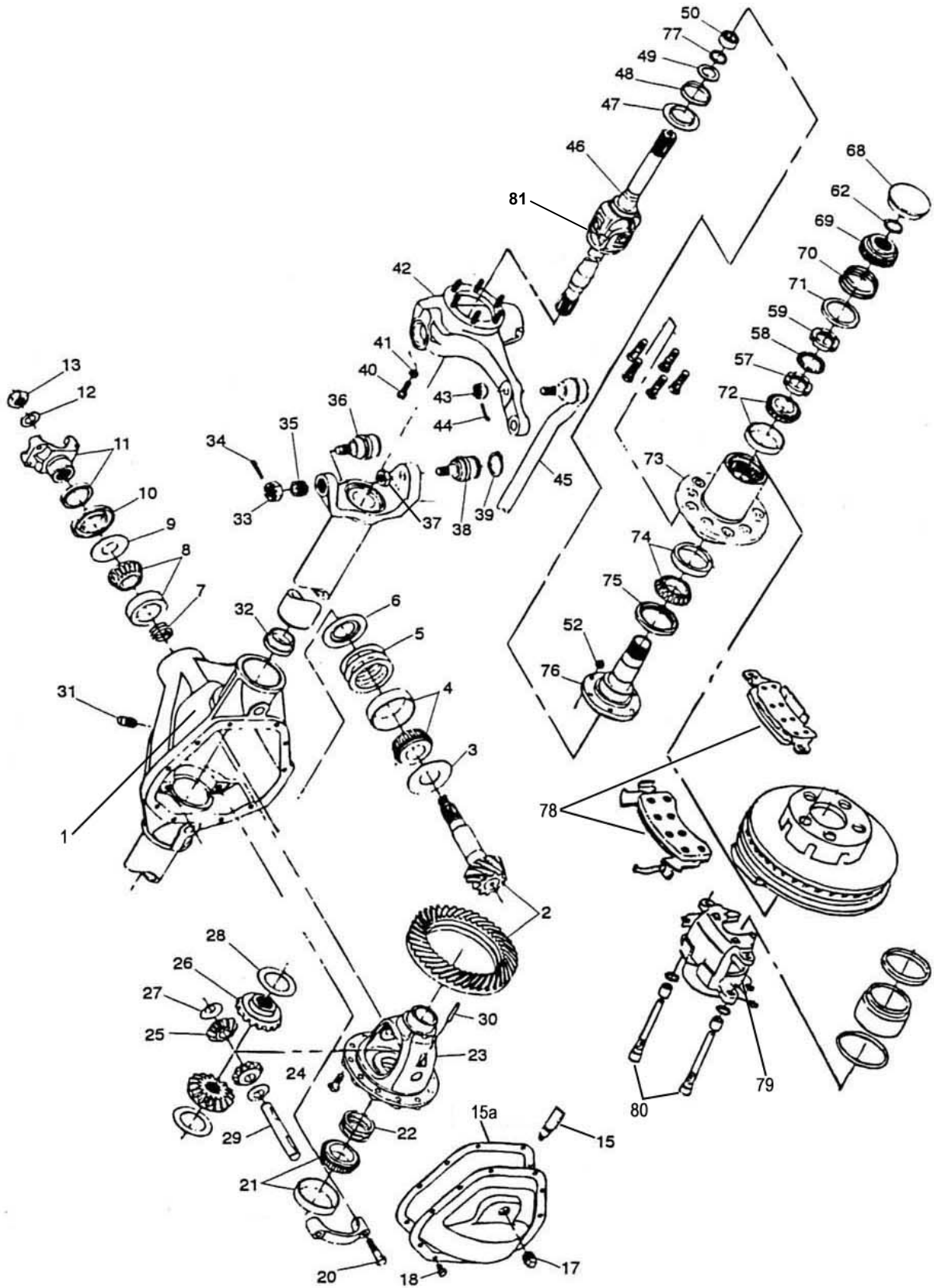
AXLES

AXLE ASSEMBLY BREAKDOWN –FRONT NON-DRIVE –DETAIL

| Item | Part Number | Qty | Description |
|------|--------------|-----|------------------------------|
| 1 | 29775-29X | 1 | TUBE ASSEMBLY |
| 2 | 44101 | 2 | NUT-SLOTTED |
| 3 | 500024-8 | 2 | PIN-COTTER |
| 4 | 35417 | 2 | RING-ADJUSTING |
| 5 | 40112 | 1 | SOCKET ASSEMBLY UPPER |
| 6 | 35566 | 2 | NUT-LOCK |
| 7 | 40113 | 1 | SOCKET ASSEMBLY LOWER |
| 8 | 35928 | 1 | RING-SNAP |
| 9 | 31026-1 | 2 | BOLT-STOP |
| 10 | 500381-3 | 2 | NUT-JAM |
| 11 | 706652X | KIT | STEERING KNUCKLE R/H |
| 11 | 706653X | KIT | STEERING KNUCKLE L/H |
| 12 | 44101 | 2 | NUT-SLOTTED |
| 13 | 500024-6 | 2 | PIN-COTTER |
| 14 | 044TR115-16X | 1 | TIE ROD ASSEMBLY |
| 15 | 36544 | 2 | PLUG-CAP |
| 16 | 38428 | 2 | SPINDLE-WHEEL BEARING |
| 17 | 35704 | 12 | NUT-LOCK |
| 18 | 36361 | 2 | SEAL-LOCK |
| 19 | 706690-X | KIT | INNER WHEEL BEARING |
| 20 | 044HU103 | 2 | HUB & ROTOR ASSEMBLY |
| 21 | 706111-X | KIT | OUTER WHEEL BEARING |
| 22 | 21588X | 2 | SPINDLE NUT |
| 23 | 36569 | 2 | LK WASHER-WHEEL BRG NUT |
| 24 | 31139 | 2 | NUT-SPINDLE |
| 25 | 31552 | 2 | CAP-HUB |
| 26 | 36326-2 | 6 | STUD STEERING KNUCKLE |
| N/S | 044WC101-2 | 1 | CALIPER ASSEMBLY R/H |
| N/S | 044WC101-1 | 1 | CALIPER ASSEMBLY L/H |
| N/S | 044WB101-1 | 1 | BRACKET ASSEMBLY-CALIPER L/H |
| N/S | 044WB101-2 | 1 | BRACKER ASSEMBLY-CALIPER R/H |
| 27 | 610286 | 8 | WHEEL STUDS |

AXLES

AXLE ASSEMBLY BREAKDOWN – FRONT DRIVE (ALL WHEEL DRIVE)



AXLES

AXLE ASSEMBLY BREAKDOWN – FRONT DRIVE – DETAIL

| Item | Part Number | Qty | Description |
|------|-------------|-----|--|
| 1 | A-TT8-00371 | 1 | COMPLETE AXLE ASSEMBLY |
| 2 | 22404X | 1 | GEAR & PINION ASSEMBLY |
| 3 | 30764 | 1 | SLINGER-PINION OIL INNER |
| 4 | 706031X | KIT | INNER PINION BEARING |
| 5 | 706617X | KIT | SHIM-PINION ADJUSTING INCLUDES ITEMS 5,7,12,13,15 & 15A |
| 6 | 30765 | 1 | BAFFLE-PINION OIL |
| 7 | 706617X | KIT | SEE ITEM 5 |
| 8 | 706030 | KIT | OUTER PINION BEARING & RACE |
| 9 | 13575 | 1 | SLINGER-PINION OIL OUTER |
| 10 | 39118 | 1 | SEAL-OIL |
| 11 | 345761X | 1 | END YOKE ASSEMBLY |
| 12 | 30186 | 1 | WASHER-PINION NUT |
| 13 | 30185 | 1 | NUT-PINION |
| 15 | 82180 | AR | RTV SEALANT |
| 15a | 34685 | 1 | GASKET |
| 17 | 36472 | 1 | PLUG-COVER PLATE |
| 18 | 34279 | 10 | SCREW-FLANGE HD |
| 19 | N/A | 2 | CAP DIFFERENTIAL BEARING |
| 20 | 48632-1 | 2 | 1/2-13 X 2.25 GRD8 HEX BOLT |
| 21 | 706032X | KIT | DIFFERENTIAL BEARING & RACE |
| 22 | 706618X | KIT | DIFFERENTIAL SHIM INCLUDES ITEM 22,15 |
| 23 | 25806X | 1 | CASE-DIFFERENTIAL ASSY |
| | 32684 | 1 | CASE-DIFFERENTIAL |
| 24 | 41221 | 10 | BOLT-DRIVE GEAR |
| 25 | 17717 | 2 | PINION-DIFFERENTIAL |
| 26 | 706027X | 2 | GEAR-DIFFERENTIAL KIT INCLUDES ITEMS 15A & 24-29 |
| 27 | 13338-3 | 2 | THRUST WASHER DIFFERENTIAL PINION |
| 28 | 32121 | 2 | THRUST WASHER DIFFERENTIAL GEAR |
| 29 | 39194 | 1 | SHAFT-DIFFERENTIAL |
| 30 | 13449 | 1 | PIN-ROLL |
| 31 | 16979 | 1 | VENT |
| 32 | 36352 | 2 | SEAL & GUIDE-SHAFT |
| 33 | 44101 | 2 | NUT-SLOTTED |
| 34 | 500024-8 | 2 | PIN-COTTER |
| 35 | 35417 | 2 | RING-ADJUSTING |
| 36 | 40112 | 1 | SOCKET ASSEMBLY-UPPER |
| 37 | 35566 | 2 | NUT-LOCK |
| 38 | 40113 | 1 | SOCKET ASSEMBLY-LOWER |
| 39 | 35928 | 1 | RING-SNAP |
| 40 | 310026-2 | 2 | BOLT-STOP |
| 41 | 500381-3 | 2 | NUT-LOCK |
| 42 | 706652X | KIT | STEERING KNUCKLE R/H INCLUDES ITEMS 33-39 & 42 |

AXLES

AXLE ASSEMBLY BREAKDOWN – FRONT DRIVE – DETAIL (CONT.)

| Item | Part Number | Qty | Description |
|------|--------------|-------|--|
| 42 | 706653X | KIT | STEERING KNUCKLE L/H |
| 43 | 44101 | 2 | NUT-SLOTTED |
| 44 | 500024-4 | 2 | PIN-COTTER |
| 45 | 044TR115-16X | 1 | TIE ROD ASSEMBLY |
| 46 | 660091-18 | 2 | SHAFT & JOINT ASSEMBLY INCLUDES ITEM 47 |
| 47 | 36364 | 1 | SLINGER |
| 48 | 38128 | 2 | SEAL-OIL |
| 49 | 38106 | 2 | SPACER |
| 50 | 550759 | 2 | BEARING-NEEDLE |
| 52 | 35704 | 12 | NUT-LOCK |
| 57 | 21588X | 2 | SPINDLE NUT |
| 58 | 36569 | 2 | LOCK-RETAINING NUT |
| 59 | 31139 | 2 | NUT-SPINDLE |
| 62 | 31624 | 2 | RING-SNAP |
| 68 | 31552 | 2 | CAP-HUB |
| 69 | 42667 | 2 | GEAR-AXLE DRIVE |
| 70 | 35218 | 2 | SPRING PRESSURE |
| 71 | 32589 | 2 | PLATE-SPRING RETAINING |
| 72 | 706111X | KIT | OUTER WHEEL BEARING & RACE |
| 73 | 044HU103 | 2 | HUB & ROTOR ASSEMBLY |
| 74 | 706690-X | KIT | INNER WHEEL BEARING & RACE |
| 75 | 36366 | 2 | AXLE SEAL |
| 76 | 706570 | KIT | SPINDLE ASSEMBLY INCLUDES ITEMS 48,49,5,77 & 76 |
| | 7065227X | KIT | SPINDLE SEAL & BEARING INCLUDES ITEMS 50,77,48 & 49 |
| 77 | 36361 | 1 | SEAL-OIL |
| 78 | RD52 | 1 SET | BRAKE PAD SET |
| 79 | 18009659 | 1 | CALIPER WITHOUT PADS -R/H |
| 79 | 18009658 | 1 | CALIPER WITHOUT PADS-L/H |
| 79 | 044WC101-1 | 1 | CALIPER ASSY WITH PADS L/H |
| 79 | 044WC101-2 | 1 | CALIPER ASSY WITH PADS R/H |
| 80 | 5468226 | 1SET | ANCHOR BOLTS |
| 81 | 5-297-1X | 2 | GREASABLE U-JOINT FOR ITEM 46 |

Recommended tools:

OTC 7157 To remove Front Axle Spindle Nut (Dana 44)

OTC 7080 To remove Front Axle Top Ball Joint (Dana 44)

OTC 1902 To remove Front & Rear Axle Spindle Nut (Dana 70)

AXLES

RECOMMENDED TORQUE SPECIFICATIONS FOR DANA 44 AXLE (FRONT)

| POSITION | THREAD | WRENCH TORQUE (LBS.-FT) |
|--|-----------|----------------------------|
| Drive Pinion Nut | 3/4 - 16 | 175-225 |
| Differential Bearing Cup Cap Screws | 1/2 - 13 | 70-90 |
| Ring Gear Cap Screws | 3/8 - 24 | 45-65 |
| Cover Screws | 5/16 - 18 | 28-33 (Note A) |
| Axle Shaft Bearing & Brake Retainer Nuts | 3/8 - 24 | 40-50 |
| Spindle Mounting Nuts | 3/8 - 24 | 40 |
| Spindle Mounting Nuts | 7/16 - 20 | 50-60 |
| Tie Rod Stud Nut | 1/2 - 20 | 35 Min (Note B) |
| Tie Rod Stud Nut | 9/16 - 18 | 35 Min (Note B) |
| Tie Rod Clamp Nuts | 3/8 - 24 | 15-25 |
| Tie Rod Clamp Nuts | 7/16 - 20 | 25-40 |
| Steering Arm Nuts | 9/16 / 18 | 80-100 |
| Steering Bolt Stop Screw & Jam Nut | 3/8 - 24 | 10-20 |

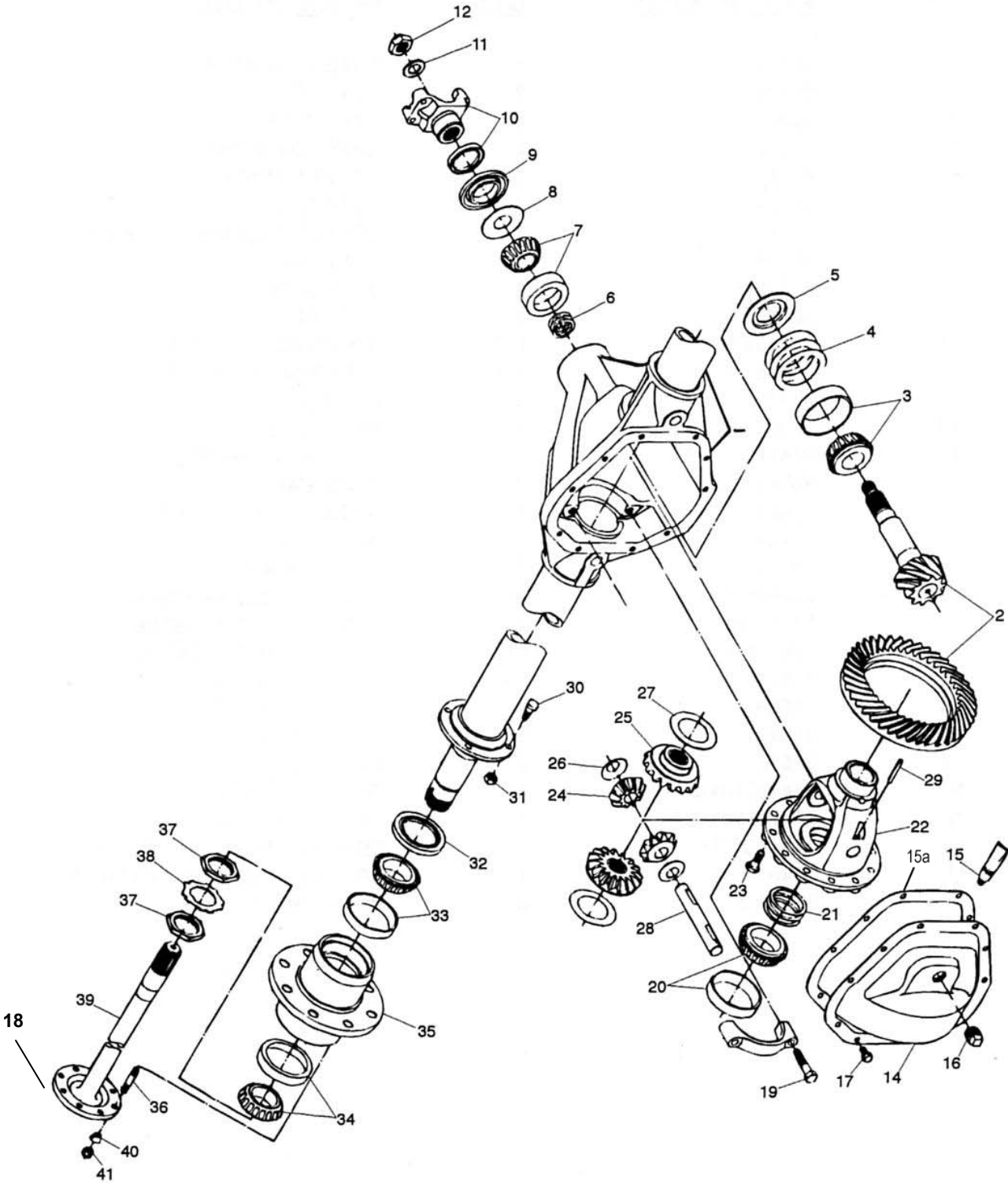
RECOMMENDED TORQUE SPECIFICATIONS FOR DANA 60 AXLE (REAR)

| POSITION | THREAD | WRENCH TORQUE (LBS.-FT) |
|-------------------------------------|------------|----------------------------|
| Drive Pinion Nut | 7/8 - 14 | 240-300 |
| Differential Bearing Cup Cap Screws | 1/2 - 13 | 70-90 |
| Ring Gear Cap Screws | 1/2 - 20 | 100-120 |
| Ring Gear Cap Screws | 1/2 - 20 | 120-14 (Note A) |
| Cover Screws | 3/8 - 16 | 30-40 |
| Brake Retainer Nuts | 7/16 - 20 | 64-70 |
| Axle Shaft Flange Nuts | 7/16 - 20 | 64-70 |
| Upper Kingpin | 1 1/8 - 12 | 500-600 |
| Kingpin Cap Cap Screws | 1/2 - 20 | 70-90 |
| Spindle Mounting Nuts | 1/2 - 20 | 60-80 |
| Tie Rod Stud Nut | 5/8 - 18 | 70 Min (Note B) |
| Tie Rod Clamp Nuts | 1/2 - 20 | 35-45 |
| Steering Arm Nuts | 1/2 - 20 | 70-90 |
| Steering Bolt Stop Screw & Jam Nut | 1/2 - 20 | 10-20 |

- A. For Grade 9 fastener with locking serrations on underside of cap screw head or nut.
- B. If cotter pin cannot be installed after minimum torque is attained, the nut must be advanced until cotter pin can be installed.

AXLES

AXLE ASSEMBLY BREAKDOWN—REAR DRIVE



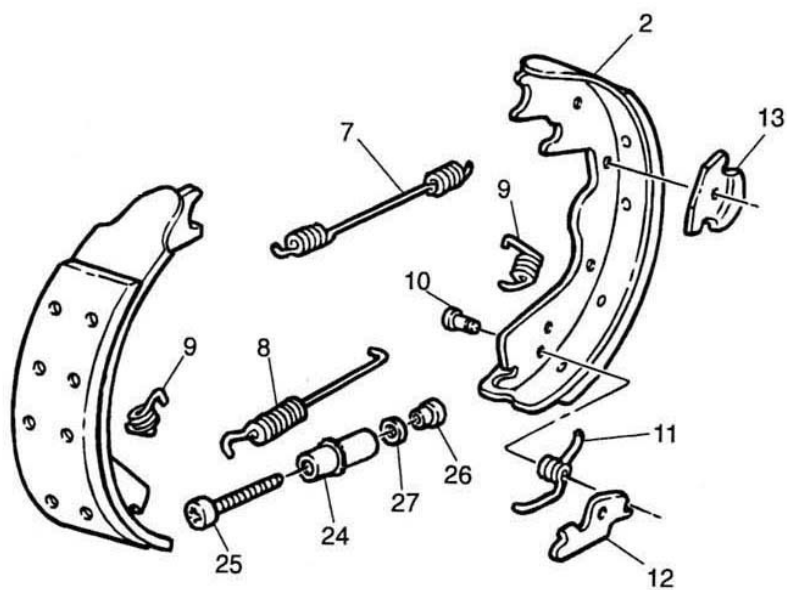
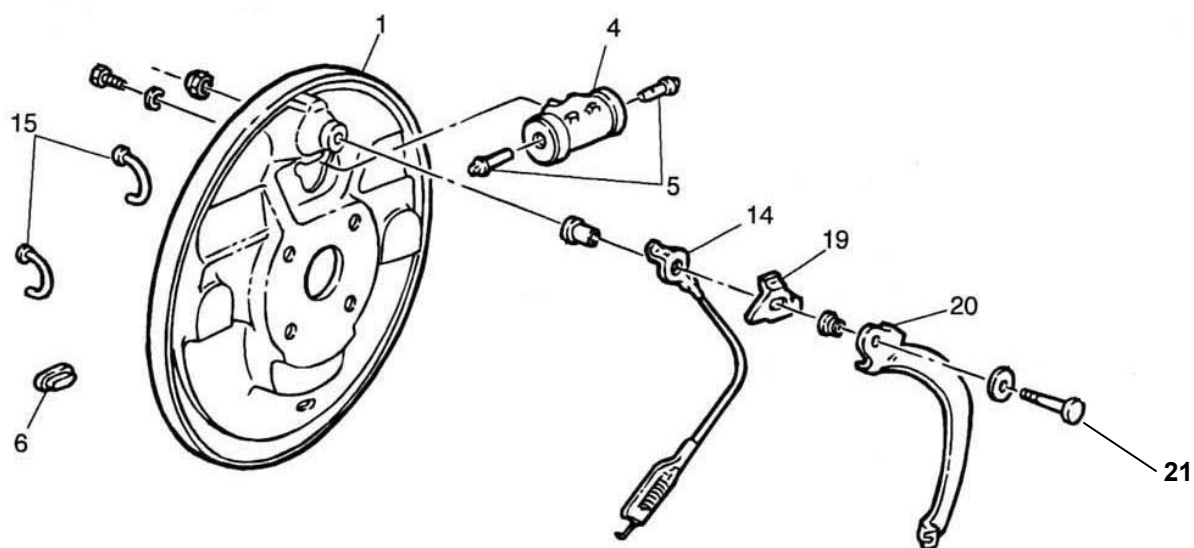
AXLES

AXLE ASSEMBLY BREAKDOWN – REAR DRIVE – DETAIL

| Item | Part Number | Qty | Description |
|------|-------------|-----|---|
| | A-TT4-00361 | 1 | COMPLETE AXLE ASSEMBLY |
| 2 | 706033-10X | KIT | DRIVE GEAR & PINION |
| 3 | 706046X | KIT | INNER PINION BEARING & RACE |
| 4 | 706672X | KIT | SHIM-DRIVE PINION ADJUSTING |
| 5 | 30765 | 1 | BAFFLE-PINION BEARING |
| 6 | 706672X | KIT | SHIM-PINION BEARING ADJUSTING |
| 7 | 706045X | KIT | OUTER PINION BEARING & RACE |
| 8 | 30273 | 1 | SLINGER-PINION BEARING |
| 9 | 38427 | 1 | SEAL-PINION |
| 10 | 345731X | 1 | END YOKE ASSEMBLY |
| 11 | 30275 | 1 | WASHER-PINION NUT |
| 12 | 30271 | 1 | NUT-PINION |
| 14 | 73597 | 1 | COVER ASSEMBLY |
| 15 | 82180 | | RTV SEALANT |
| 15a | 39697 | 1 | AXLE GASKET |
| 16 | 98785 | 1 | PLUG-PIPE SLOTTED |
| 17 | 34822 | 10 | SCREW-FLANGE HD |
| 18 | 39697 | 1 | AXLE SHAFT GASKET |
| 19 | 48632-1 | 2 | 1/2-13 x 2.25 GRD8 BOLT BEARING CAP |
| 20 | 706047X | KIT | BEARING & RACE |
| 21 | 706673X | KIT | SHIM-DIFFERENTIAL BEARING |
| 22 | 706669X | KIT | CASE-DIFFERENTIAL |
| 23 | 30266 | 10 | BOLT-DRIVE GEAR |
| 24 | SEE KIT | KIT | PINION-DIFFERENTIAL |
| 25 | SEE KIT | KIT | GEAR-DIFFERENTIAL |
| 26 | SEE KIT | KIT | THRUST WASHER-PINION |
| 27 | SEE KIT | KIT | THRUST WASHER-GEAR |
| 28 | SEE KIT | KIT | SHAFT-DIFFERENTIAL |
| 29 | 500598-21 | 1 | LOCK-DIFFERENTIAL |
| 30 | 36253 | 8 | BOLT-BRAKE MANUFACTURING |
| 31 | 36805 | 8 | NUT-BRAKE MANUFACTURING |
| 32 | 36240 | 2 | SEAL-OIL |
| 33 | 706071X | KIT | INNER WHEEL BEARING |
| 34 | 706072X | KIT | OUTER WHEEL BEARING |
| 35 | 36241 | 2 | HUB & DRUM ASSEMBLY |
| 36 | 36847 | 8 | STUD-HUB |
| 37 | 30636 | 4 | NUT-SPINDLE |
| 38 | 30637 | 2 | LOCK WASHER WHEEL BEARING |
| 39 | 34887-7 | 1 | SHAFT-AXLE FLANGE LONG |
| | 34887-10 | 1 | SHAFT-AXLE FLANGE SHORT |
| 40 | 31534 | 16 | ADAPTER-STUD |
| 41 | 36805 | 24 | NUT-LOCK |
| | 16979 | 1 | VENT |
| | 060WD100 | 1 | BRAKE ASSEMBLY-SHOE TYPE-RIGHT |
| | 060WD101 | 1 | BRAKE ASSEMBLY-SHOE TYPE-LEFT |
| KIT | 706671X | 1 | DIFFERENTIAL PARTS (STANDARD) INCLUDES 15, 21-23, 29 |

BRAKES

DRUM BRAKE ASSEMBLY—REAR



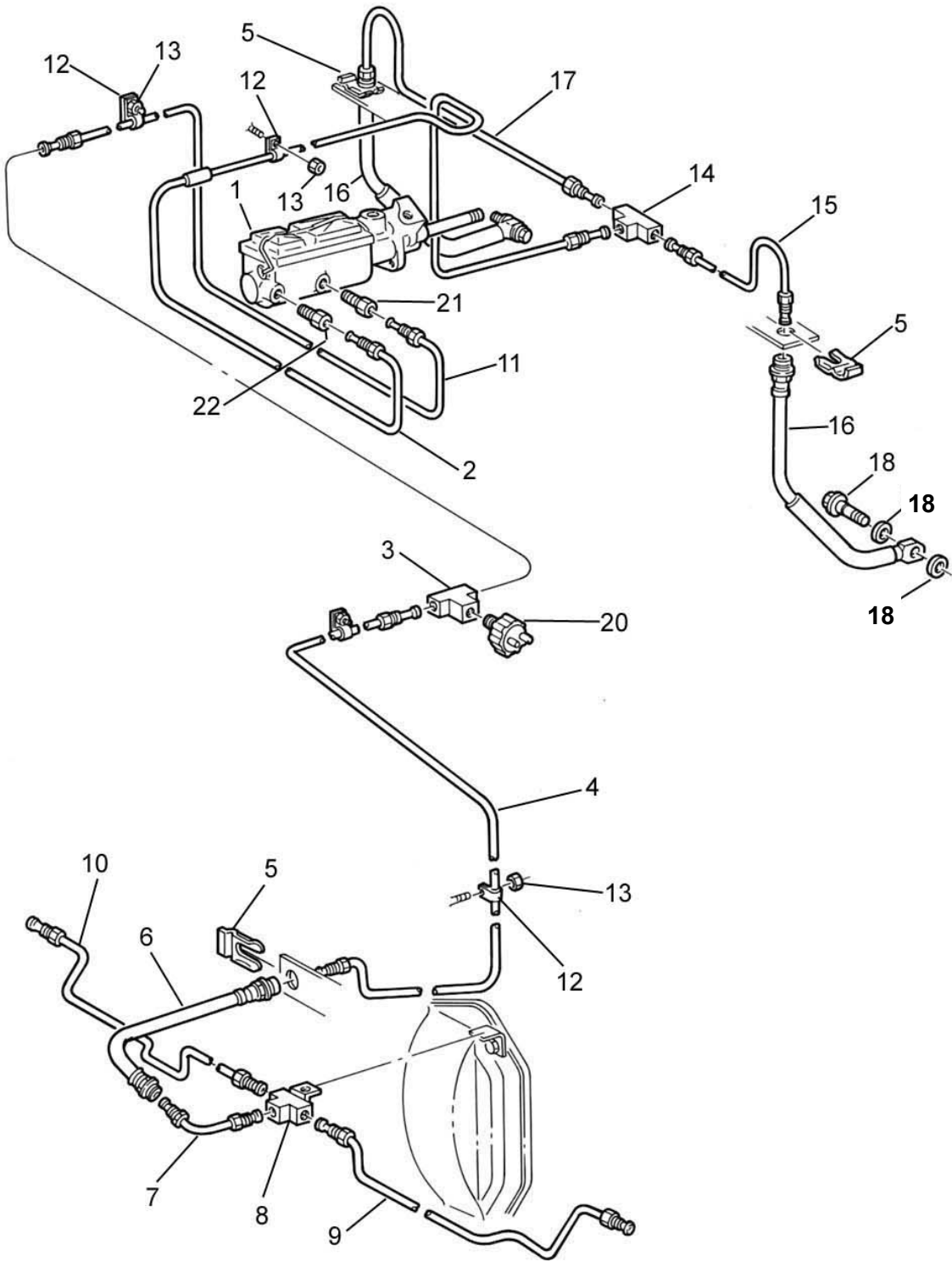
BRAKES

DRUM BRAKE ASSEMBLY—REAR—DETAIL

| Item | Part Number | Qty | Description |
|--------------------------------|----------------|-------|-----------------------------------|
| | 060WD101 | 1 | BRAKE ASSEMBLY L/H |
| | 060WD100 | 1 | BRAKE ASSEMBLY R/H |
| 1 | 4313905 | 1 | BACKING PLATE L/H |
| 1 | 4313904 | 1 | BACKING PLATE R/H |
| 2 | FR357 | 1 SET | SHOE & LINING SET |
| 4 | 2235585 | 1 | CYLINDER ASSEMBLY L/H |
| 4 | 2235586 | 1 | CYLINDER ASSEMBLY R/H |
| 5 | 315834 | 2 | WHEEL CYLINDERS CONNECTING LINK |
| 6 | *SEE KIT BELOW | 1 | COVER |
| 7 | *SEE KIT BELOW | 1 | SPRING-UPPER |
| 8 | *SEE KIT BELOW | 1 | SPRING-LOWER |
| 9 | *SEE KIT BELOW | 2 | SPRING-HOLD DOWN |
| 10 | *SEE KIT BELOW | 1 | PIN |
| 11 | *SEE KIT BELOW | 1 | SPRING TENSION |
| 12 | *SEE KIT BELOW | 1 | BRAKE ADJUSTING LINK |
| 13 | *SEE KIT BELOW | 1 | CABLE GUIDE |
| 14 | *SEE KIT BELOW | 1 | CABLE ASSEMBLY |
| 15 | *SEE KIT BELOW | 2 | SPRING-HOLD DOWN |
| 19 | 4383299 | 1 | PARKING BRAKE CAM L/H |
| 19 | 4383298 | 1 | PARKING BRAKE CAM R/H |
| 20 | 4383264 | 1 | PARKING BRAKE LEVER (LEFT) |
| 20 | 4383265 | 1 | PARKING BRAKE LEVER (RIGHT) |
| 21 | 4419698 | 1 | BRAKE ANCHOR BOLT |
| 24 | *SEE KIT BELOW | 1 | BRAKE ADJUSTING SOCKET L/H |
| 25 | *SEE KIT BELOW | 1 | BRAKE ADJUSTING SCREW L/H |
| 26 | *SEE KIT BELOW | 1 | BRAKE ADJUSTING SOCKET |
| 27 | *SEE KIT BELOW | 1 | WASHER FLAT |
| KIT | H2588 | LEFT | BRAKE ADJUSTING KIT INCLUDES PART |
| | | | 6,10,11,12,14,13,20,24,25,26,27 |
| KIT | H2589 | RIGHT | BRAKE ADJUSTING KIT INCLUDES PART |
| | | | 6,10,11,12,14,13,20,24,25,26,27 |
| KIT | H7146 | | BRAKE SPRING KIT INCLUDES PART |
| | | | 7,8,9,15 |
| *KIT PARTS NOT SOLD SEPERATELY | | | |

BRAKES

BRAKE SYSTEM—HYDRAULIC



BRAKES

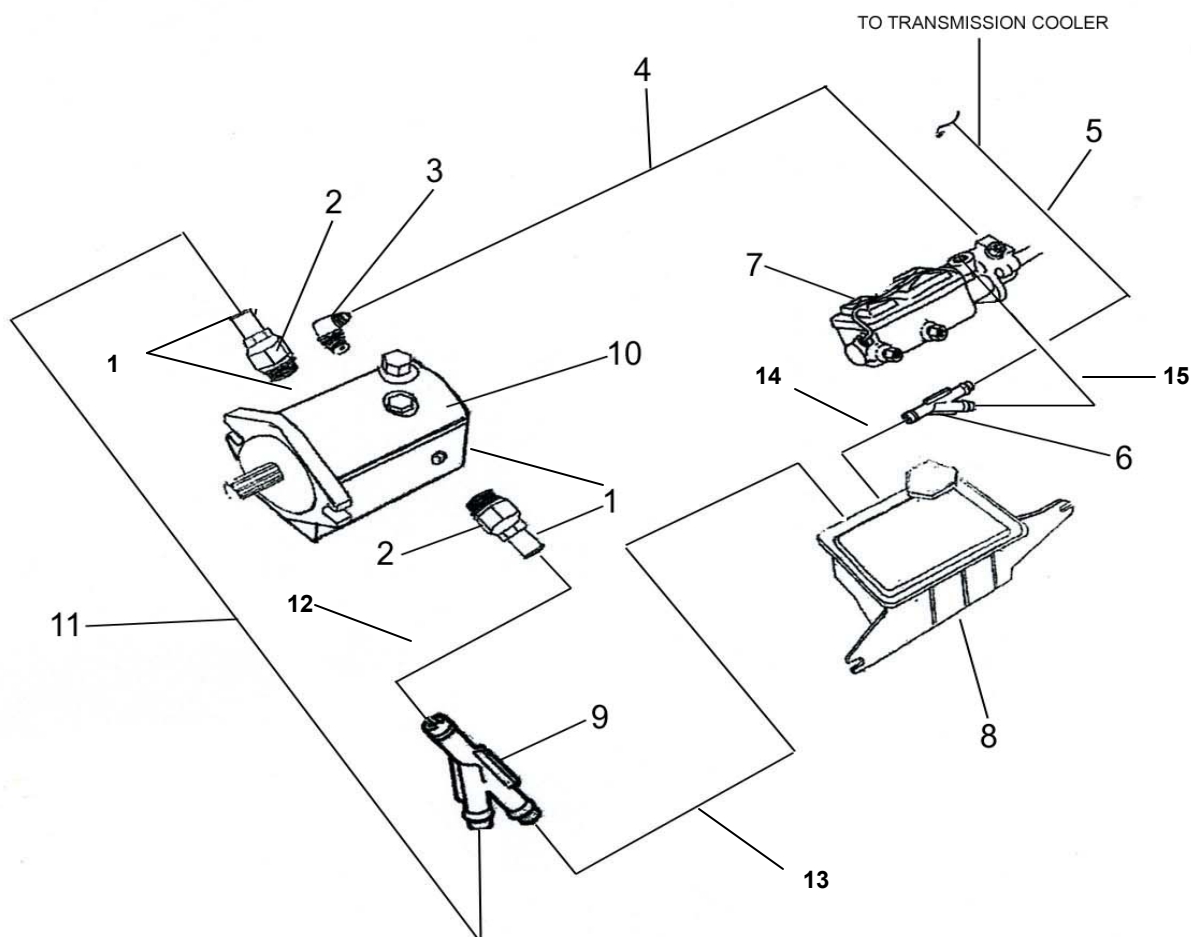
BRAKE SYSEM—HYDRAULIC—DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|---------------------------------|
| 1 | A-TT4-00161-1 | 1 | MASTER CYLINDER |
| 2 | A-TT4-00162 | 1 | BRAKE LINE MASTER CYLINDER |
| 3 | A-TT4-00163 | 1 | BRAKE LIGHT SWITCH TEE |
| 4 | A-TT4-00164 | 1 | BRAKE LINE REAR |
| 5 | A-TT4-00165 | 3 | BRAKE HOSE CLAMP |
| 6 | A-TT4-00166 | 1 | BRAKE HOSE REAR |
| 7 | A-TT4-00167 | 1 | BRAKE LINE |
| 8 | A-TT4-00168 | 1 | CROSS TEE |
| 9 | A-TT4-00169 | 1 | BRAKE LINE REAR RT |
| 10 | A-TT4-00170 | 1 | BRAKE LINE LEFT REAR LT |
| 11 | A-TT4-00171 | 1 | BRAKE LINE REAR |
| 12 | NPN | 4 | LINE CLAMP |
| 13 | NPN | 4 | NUT-10-32 |
| 14 | A-TT4-00174 | 1 | CROSS TEE |
| 15 | A-TT4-00175 | 1 | BRAKE LINE FRONT RIGHT |
| 16 | A-TT4-00176-1 | 2 | CALIPER BRAKE LINE |
| 17 | A-TT4-00177 | 1 | BRAKE LINE FRONT LEFT |
| 18 | A-TT4-00178 | 2 | BANJO BOLT & WASHER KIT |
| 20 | A-TT4-00173 | 1 | BRAKE LIGHT SWITCH |
| 21 | A-TT5-00180 | 1 | FITTING-MASTER CYLINDER ADAPTER |
| 22 | A-TT5-00181 | 1 | FITTING-MASTER CYLINDER ADAPTER |

NOTES:

BRAKES

HYDRAULIC ACTUATION BRAKING SYSTEM

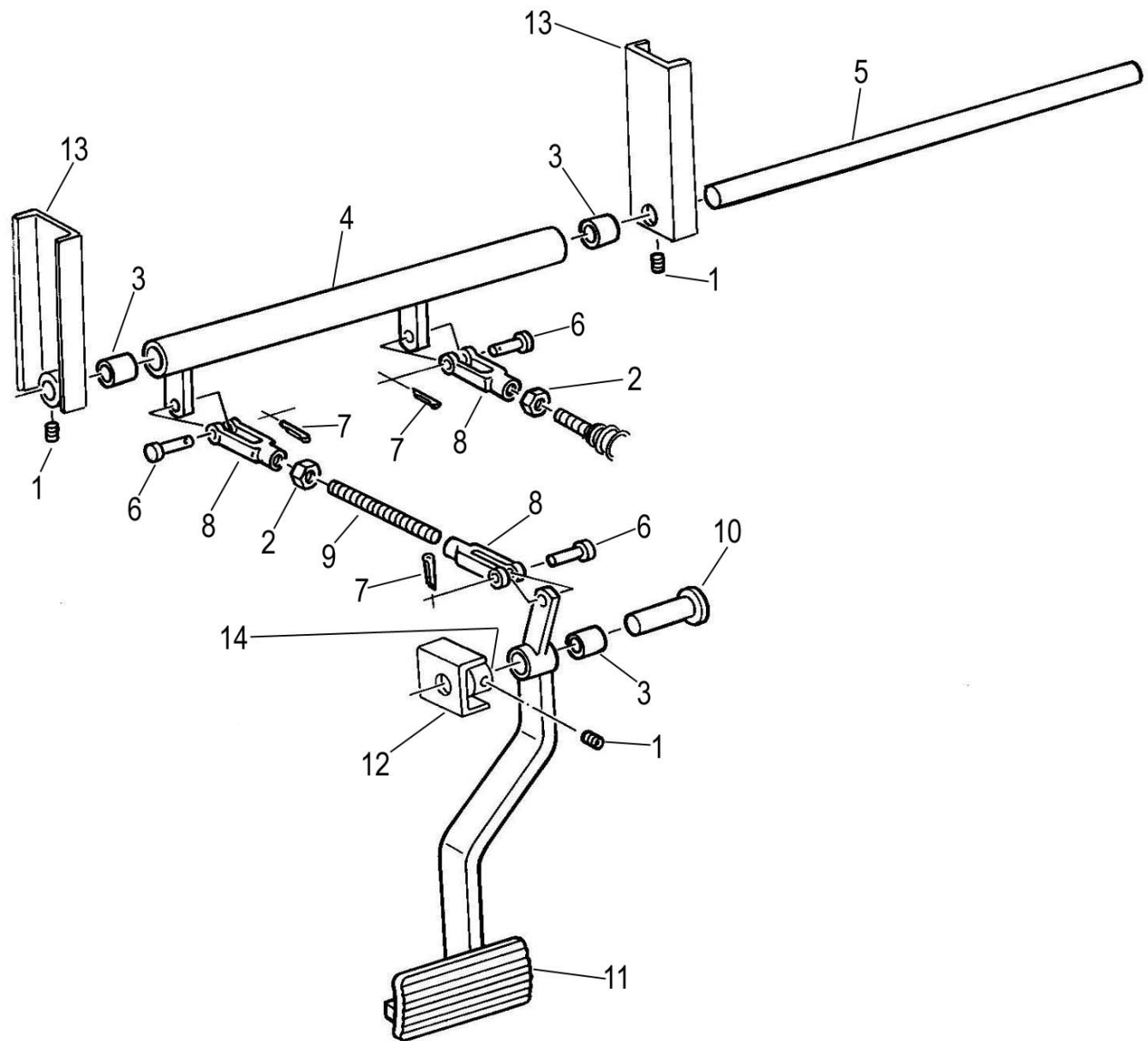


HYDRAULIC ACTUATION BRAKING SYSTEM DETAIL

| Item | Part Number | Qty | Description |
|------|------------------|-----|--------------------------------------|
| 1 | A-TT4-00606-1A | 5 | NIPPLE |
| 2 | C3269X12X8 | 2 | BUSHING |
| 3 | C5515X6 | 1 | 90 DEGREE SWIVEL FITTING |
| 4 | 06UB67-56-06U606 | 1 | CUT TO FIT, BULK HOSE |
| 5 | NPN | 1 | CUT TO FIT, BULK HOSE - 3/8" 350 PSI |
| 6 | A-TT4-00207 | 1 | RETURN LINE TEE |
| 7 | A-TT4-00161-1 | 1 | MASTER CYLINDER |
| 8 | F81Z3A697AB | 1 | POWER STEERING RESERVOIR TANK |
| 9 | A-TT4-00606-1 | 1 | Y FITTING |
| 10 | SP20PB11L145H3R | 1 | PUMP |
| 11 | 12GMV MEGAVAC | 1 | BULK HOSE 3/4" SUCTION 37" |
| 12 | 12GMV MEGAVAC | 1 | BULK HOSE 3/4" SUCTION 3" |
| 13 | 12GMV MEGAVAC | 1 | BULK HOSE 3/4" SUCTION 31" |
| 14 | NPN | 1 | CUT TO FIT, BULK HOSE - 3/8" 350 PSI |
| 15 | NPN | 1 | CUT TO FIT, BULK HOSE - 3/8" 350 PSI |

BRAKES

BRAKE ACTUATOR ASSEMBLY



BRAKES

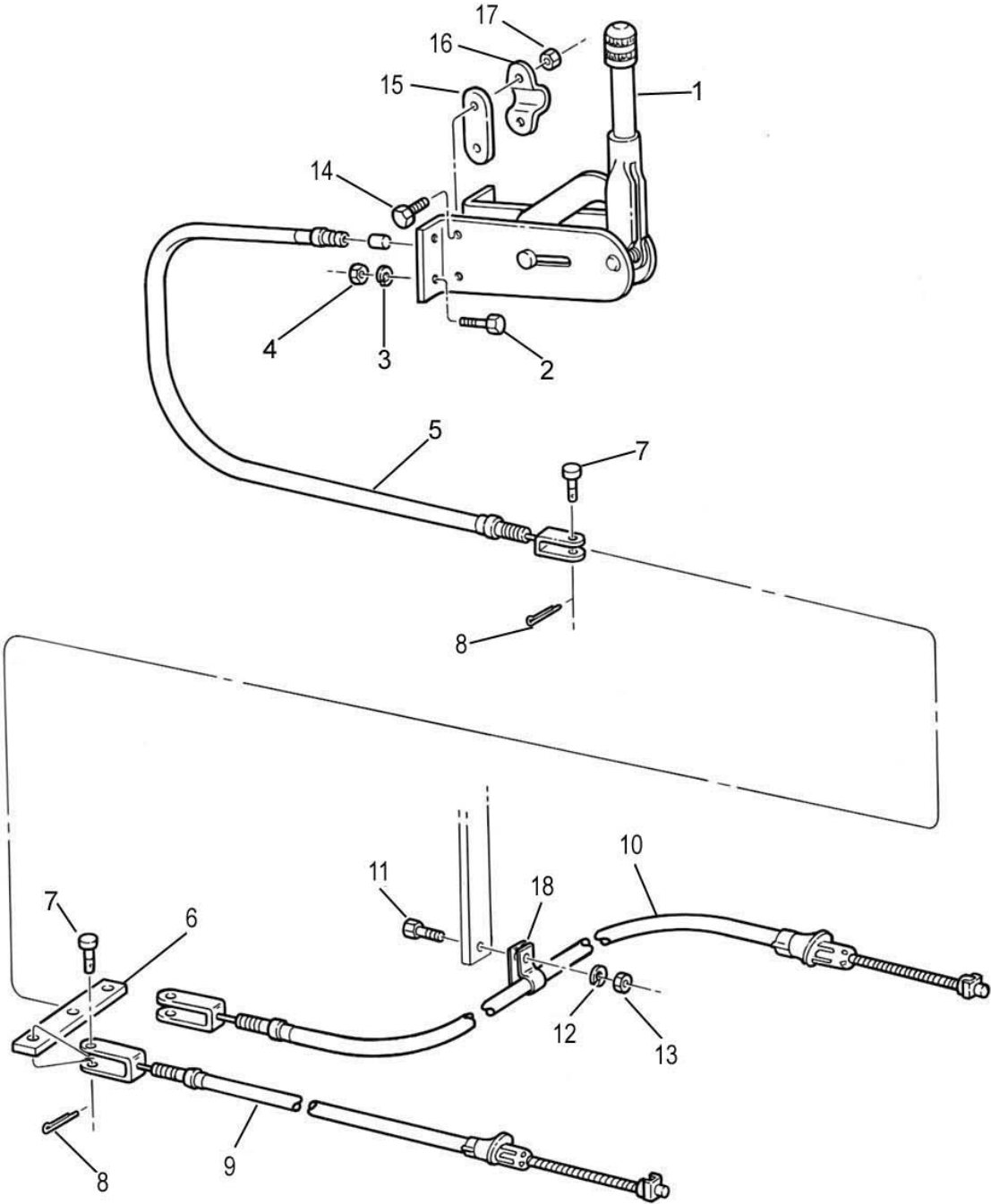
BRAKE ACTUATOR ASSEMBLY—DETAIL

| Item | Part Number | Qty | Description |
|------|-------------|-----|--------------------------------------|
| 1 | NPN | 4 | $\frac{1}{4}$ -20 SET SCREW |
| 2 | NPN | 2 | $\frac{1}{2}$ -20 NUT |
| 3 | C-TT4-10188 | 3 | THOMSON NYLINER BEARING |
| 4 | C-TT4-10186 | 1 | BELL CRANK |
| 5 | C-TT4-10187 | 1 | BELL CRANK PIVOT SHAFT |
| 6 | A-TT4-00193 | 3 | CLEVIS PIN |
| 7 | NPN | 3 | COTTER PIN |
| 8 | A-TT4-10192 | 3 | CLEVIS |
| 9 | NPN | 1 | $\frac{1}{2}$ -20 X 12 ADJUSTING ROD |
| 10 | C-TT4-10182 | 1 | BRAKE PEDAL PIVOT SHAFT |
| 11 | C-TT4-10181 | 1 | BRAKE PEDAL |
| 12* | NPN | 1 | BRAKE PEDAL PIVOT |
| 13 | NPN | 2 | BELL CRANK STANDOFF |
| 14 | A-TT2-0057* | 2 | SHAFT COLLAR $\frac{3}{4}$ |

* Welded to truck

BRAKES

PARKING BRAKE ACTUATOR ASSEMBLY



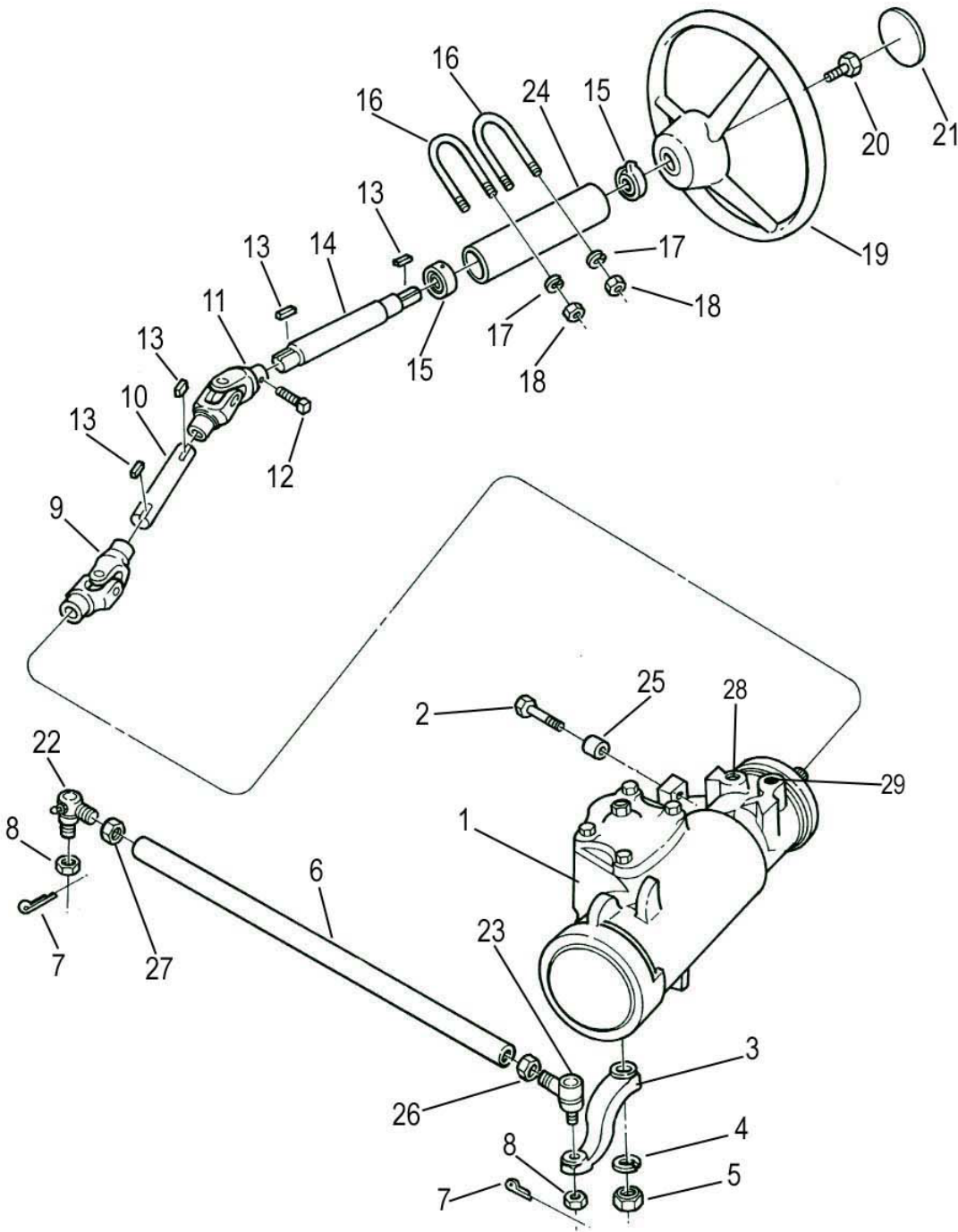
BRAKES

PARKING BRAKE ACTUATOR ASSEMBLY—DETAIL

| Item | Part Number | Qty | Description |
|------|-----------------------------------|-----|-----------------------------------|
| 1 | A-TT4-00141 | 1 | HAND BRAKE |
| 2 | NPN | 4 | SCREW-HEX CAP-5/16-18 X 1 |
| 3 | NPN | 4 | WASHER-FLAT-5/16 |
| 4 | NPN | 4 | NUT-LOCK-5/16-18 |
| 5 | B-TT4-00145 | 1 | CABLE PRIMARY |
| 6 | A-TT4-00146 | 1 | BAR EQUALIZER |
| 7 | NPN | 3 | CLEVIS PIN |
| 8 | NPN | 3 | COTTER PIN |
| 9 | A-TT4-00151 | 1 | PARKING BRAKE CABLE LEFT REAR |
| 10 | A-TT4-00150 | 1 | PARKING BRAKE CABLE RIGHT REAR |
| 11 | NPN | 1 | SCREW-HEX CAP-14-20 X 1 |
| 12 | NPN | 1 | WASHER-FLAT-1/4 |
| 13 | NPN | 1 | NUT-LOCK-1/4-20 |
| 14 | NPN | 1 | SCREW-HEX CAP-1/4-28 X 1 |
| 15 | NPN | 1 | CABLE CLAMP PLATE |
| 16 | NPN | 1 | CABLE CLAMP HANDLE |
| 17 | NPN | 2 | NUT-LOCK-1/4-28 |
| 18 | NPN | 2 | CABLE CLAMP |
| | THE FOLLOWING ITEMS ARE NOT SHOWN | | |
| 19 | AE-OPT-0069 | | HAND BRAKE "ON" WARNING (OPTION) |
| 20 | AE-OPT-0069 SHUTDOWN | | HAND BRAKE "ON" SHUTDOWN (OPTION) |
| 21 | 275.12 | | BUZZ LITE FOR PARKING BRAKE |
| 22 | 81008429 | | CONTACT PIN |
| 23 | 82050000 | | PROXIMITY SENSOR |
| 24 | 82066700 | | MOUNTING SCREW |
| 25 | 332-209-150 | | RELAY |
| 26 | A-TT4-00250 | | NEUTRAL SAFETY SWITCH |

STEERING SYSTEM

STEERING SYSTEM BREAKDOWN



STEERING SYSTEM

STEERING SYSTEM BREAKDOWN—DETAIL

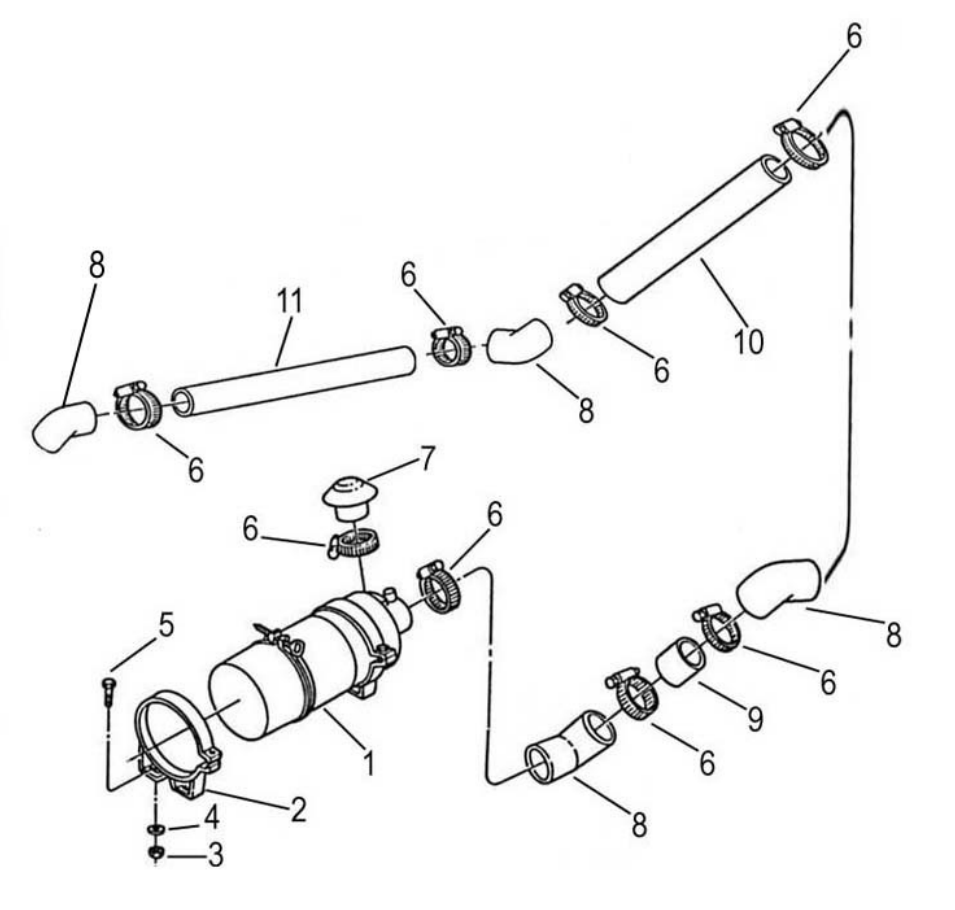
| Item | Part Number | Qty | Description |
|------|---------------|-----|-------------------------------|
| 1 | A-TT4-00381 | 1 | STEERING BOX |
| 2 | NPN | 4 | SCREW-HEX CAP-7/16-14 X 2 GR8 |
| 3 | A-TT4-00382 | 1 | PITTMAN ARM |
| 4 | NPN | 1 | WASHER-LOCK-3/4 |
| 5 | NPN | 1 | NUT-LOW-3/4-10 |
| 6 | A-TT4-00386 | 1 | DRAG LINK |
| 7 | NPN* | 2 | COTTER PIN 1/8 X 1 ½ |
| 8 | NPN* | 2 | NUT-TIE ROD ½-20 |
| 9 | A-TT4-00389 | 1 | UNIVERSAL COUPLER |
| 10 | A-TT4-00390 | 1 | SHAFT COUPLING |
| 11 | A-TT4-00391 | 1 | UNIVERSAL JOINT |
| 12 | NPN | 2 | LOCKING BOLT-DOG POINT 3/8-16 |
| 13 | A-TT4-00393 | 4 | GIBB KEY |
| 14 | A-TT4-00394-1 | 1 | STEERING SHAFT |
| 15 | A-TT4-00395 | 2 | BEARING |
| 16 | A-TT4-00396 | 2 | 2 1/8 U-BOLT 3/8HD |
| 17 | NPN** | 4 | WASHER-FLAT-5/16 |
| 18 | NPN** | 4 | NUT-LOCK-5/16-18 |
| 19 | A-TT4-00399-1 | 1 | STEERING WHEEL |
| 20 | N/A | 1 | SCREW-HEX CAP-3/8-24 X 1 |
| 21 | A-TT4-00401-1 | 1 | COVER PLATE |
| 22 | A-TT4-00402 | 1 | TIE ROD END L/H |
| 23 | A-TT4-00403 | 1 | TIE ROD END R/H |
| 24 | A-TT4-00404 | 1 | STEERING TUBE |
| 25 | A-TT4-00405 | 4 | SPACERS |
| 26 | A-TT4-00406 | 1 | 3/4-16 NUT-JAM-L/H |
| 27 | A-TT4-00407 | 1 | 3/4-16 NUT-JAM-R/H |
| 28 | A-TT4-00212 | 1 | HIGH PRESSURE EXTENDER |
| 29 | A-TT4-00204 | 1 | RETURN LINE EXTENDER |

* 7 & 8 NOT SOLD SEPARATELY - INCLUDED IN PART # 22 & 23

** PARTS INCLUDED IN PART # 16

AIR CLEANER

AIR CLEANER ASSEMBLY – DIESEL

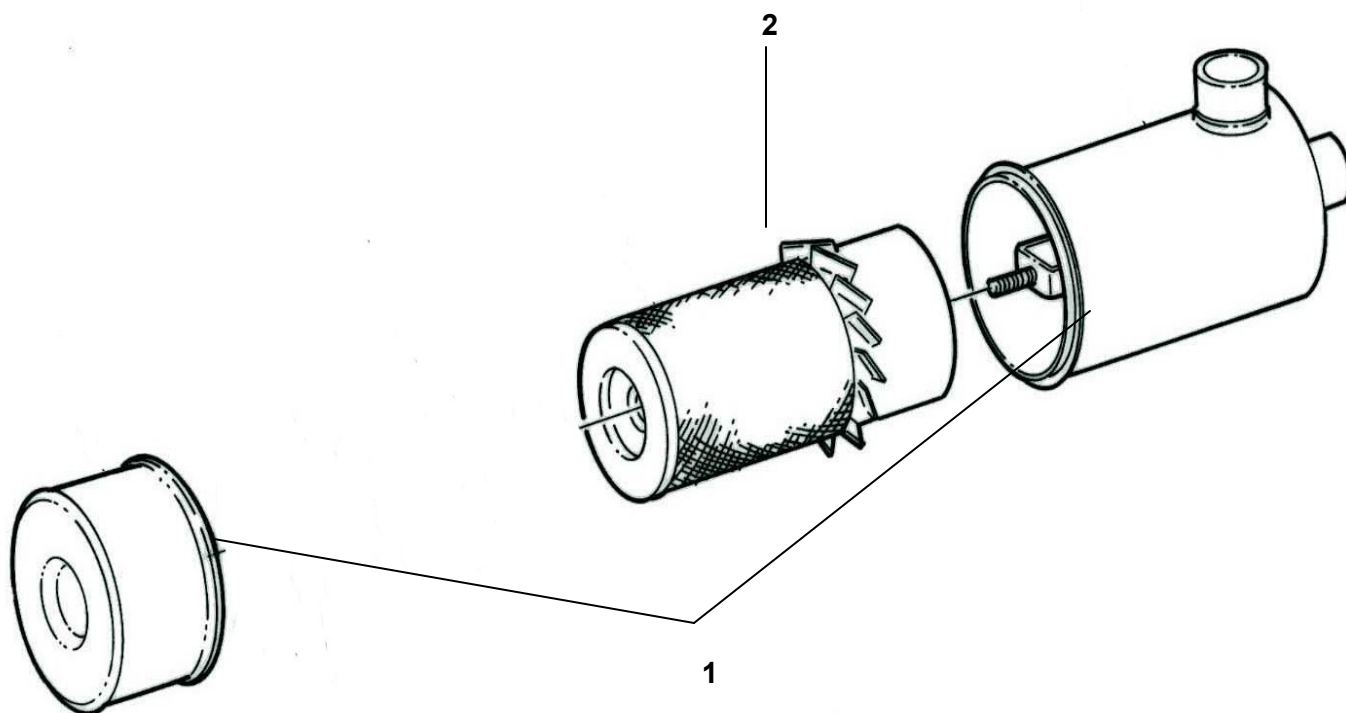


AIR CLEANER ASSEMBLY – DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|-------------------------------|
| 1 | A-TT4-00091-1 | 1 | AIR CLEANER ASSEMBLY 3" |
| 1 | A-TT4-00091 | 1 | AIR CLEANER ASSEMBLY 2" |
| 2 | A-TT4-00092 | 2 | AIR CLEANER BRACKET |
| 3 | NPN | 4 | NUT-LOCK 3/8-16 |
| 4 | NPN | 4 | WASHER-FLAT 3/8 |
| 5 | NPN | 4 | SCREW-HEX CAP 3/8-16 X 1 GR.5 |
| 6 | NPN | 10 | HOSE CLAMPS |
| 7 | A-TT4-00098-1 | 1 | RAIN CAP 3" |
| 7 | A-TT4-00098 | 1 | RAIN CAP 2" |
| 8 | A-TT4-00094-3 | 4 | 45 DEGREE ELBOW |
| 9 | NPN | 1 | BULK-INTAKE TUBE - 3" |
| 10 | NPN | 1 | BULK-INTAKE TUBE - 17.5" |
| 11 | NPN | 1 | BULK-INTAKE TUBE - 16.5" |

AIR CLEANER

AIR CLEANER SUB-ASSEMBLY

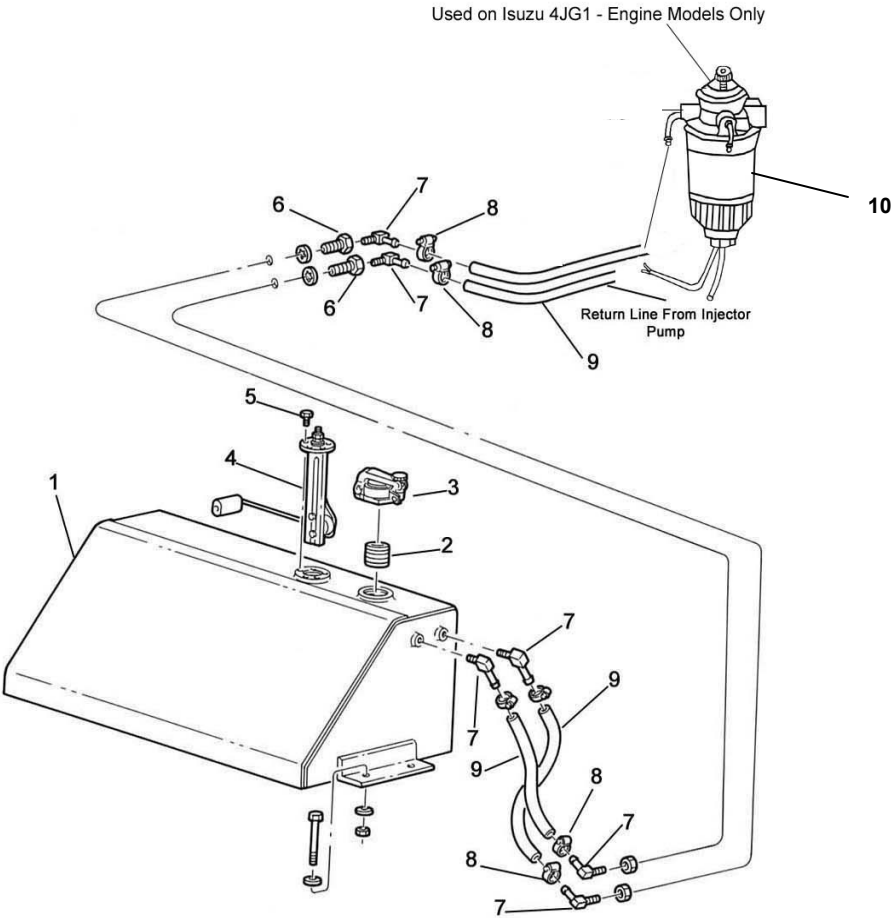


AIR CLEANER SUB-ASSEMBLY—DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|------------------------|
| 1 | A-TT4-00091 | 1 | AIR CLEANER 2" |
| | A-TT4-00091-1 | 1 | AIR CLEANER 3" |
| 2 | P14-8966 | 1 | AIR CLEANER ELEMENT 2" |
| | P549271 | 1 | AIR CLEANER ELEMENT 3" |

FUEL SYSTEM

FUEL SYSTEM—DIESEL

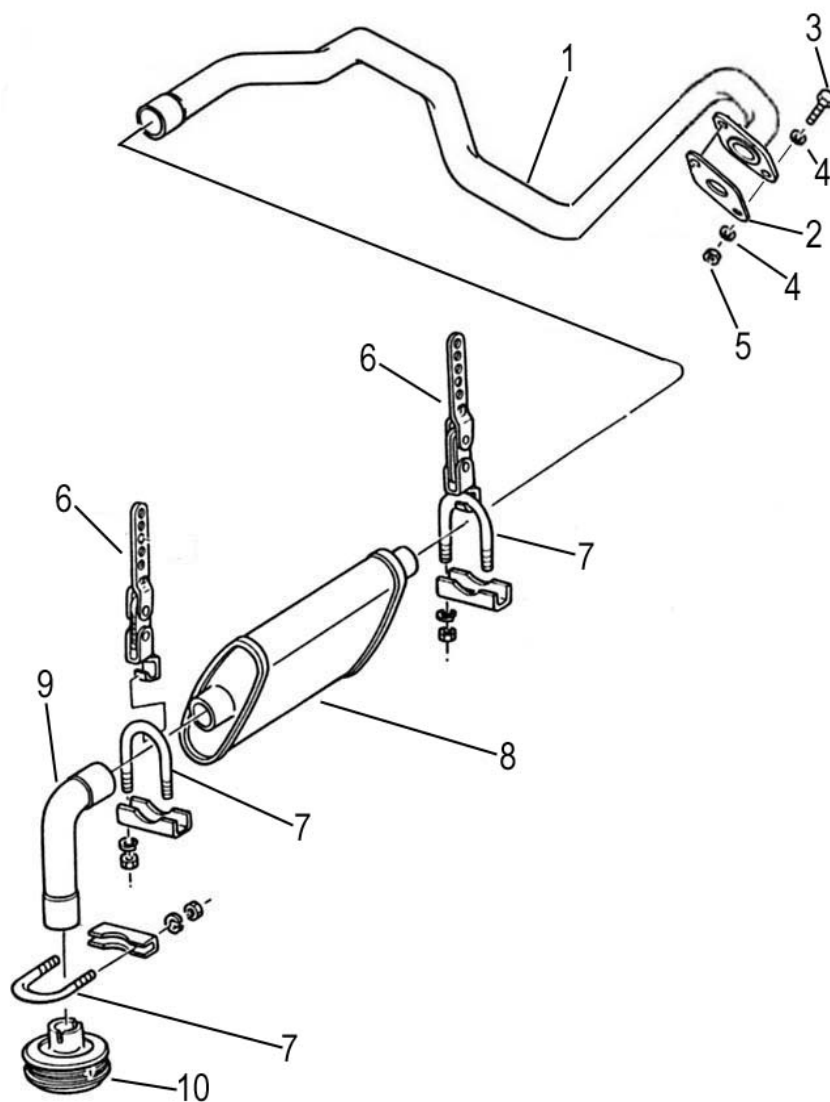


FUEL SYSTEM—DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|--|
| 1 | A-TT4-00273 | 1 | FUEL TANK |
| 2 | A-TT4-00272 | 1 | NIPPLE |
| 3 | A-TT4-00271-1 | 1 | FUEL CAP |
| 4 | A-TT4-00276 | 1 | FUEL SENDING UNIT |
| 5 | NPN | 8 | SCREW -HEX CAP-10-32 X3/4 |
| 6 | A-TT4-00280 | 2 | BULK HEAD FITTING |
| 7 | A-TT4-00274 | 6 | 90 DEGREE ELBOW FITTING |
| 8 | NPN | 6 | HOSE CLAMP |
| 9 | NPN | 2 | BULK-5/16 FUEL LINE |
| NS | 8-94414-796-3 | 1 | FUEL FILTER ELEMENT (4JB1 ENGINE ONLY) |
| 10 | 897213-4720 | 1 | FUEL FILTER ELEMENT (4JG1 ENGINE ONLY) |

EXHAUST

EXHAUST SYSTEM- DIESEL

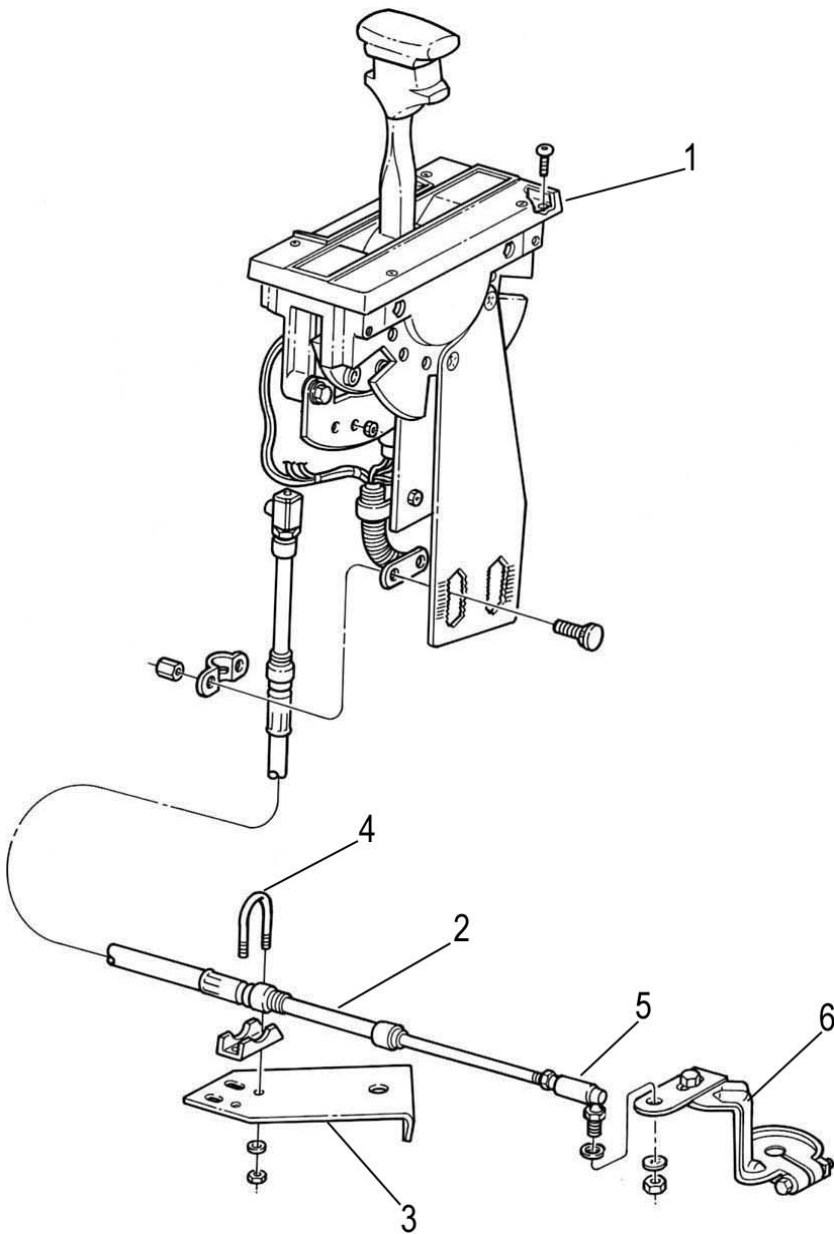


EXHAUST SYSTEM—DETAIL

| Item | Part Number | Qty | Description |
|------|--------------------|-----|----------------------------------|
| 1 | A-TT4D-00253-2 | 1 | DIESEL EXHAUST PIPE |
| 2 | A-TT12-00251 | 1 | EXHAUST GASKET |
| 3 | NPN | 2 | SCREW-HEX-CAP 3/8-16 X 1-1/4 |
| 4 | NPN | 2 | WASHER FLAT 3/8 |
| 5 | NPN | 2 | NUT-HEX 3/8-10 |
| 6 | A-TT4-00260 | 2 | PIPE HANGER |
| 7 | A-TT4-00254 | 3 | 2" MUFFLER CLAMPS |
| 8 | A-TT4-00258-1 | 1 | MUFFLER |
| 9 | A-TT4-00259-1 | 1 | 90 DEGREE TAIL PIPE |
| 10 | AE-OPT-0059-RETAIL | 1 | SPARK ARRESTER (OPTION) |
| 11 | AE-OPT-0059 | 1 | SPARK ARRESTING MUFFLER (OPTION) |
| 12 | AE-OPT-0029 | 1 | DIESEL SCRUBBER (OPTION) |

OPERATOR COMPARTMENT

TRANSMISSION CONTROL

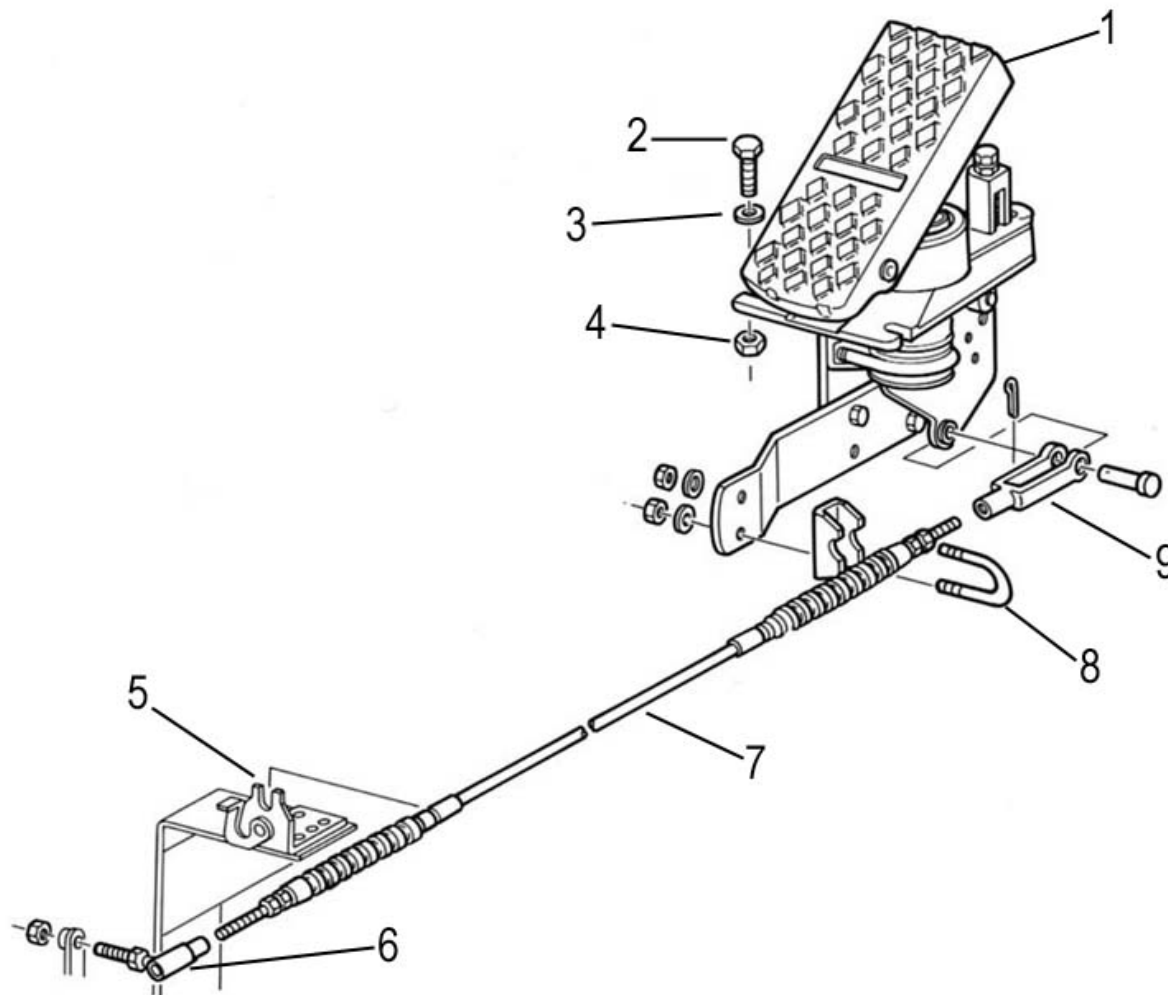


TRANSMISSION CONTROL—DETAIL

| Item | Part Number | Qty | Description |
|------|-------------|-----|---------------------------------------|
| 1 | A-TT4-00245 | 1 | TRANSMISSION SHIFT CONTROL |
| 2 | A-TT4-00246 | 1 | TRANSMISSION SHIFT CABLE |
| 3 | A-TT4-00248 | 1 | TRANSMISSION CABLE BRACKET ASSEMBLY |
| 4 | A-TT4-00247 | 1 | U-BOLT KIT |
| 5 | A-TT4-00249 | 1 | BALL JOINT KIT |
| 6 | A-TT4-00419 | 1 | TRANSMISSION LEVER |
| 7 | 302008 | 1 | INDICATOR STRIP REPAIR KIT(NOT SHOWN) |
| 8 | 302348 | 1 | HANDLE REPAIR KIT(NOT SHOWN) |

OPERATOR COMPARTMENT

ACCELERATOR PEDAL ASSEMBLY



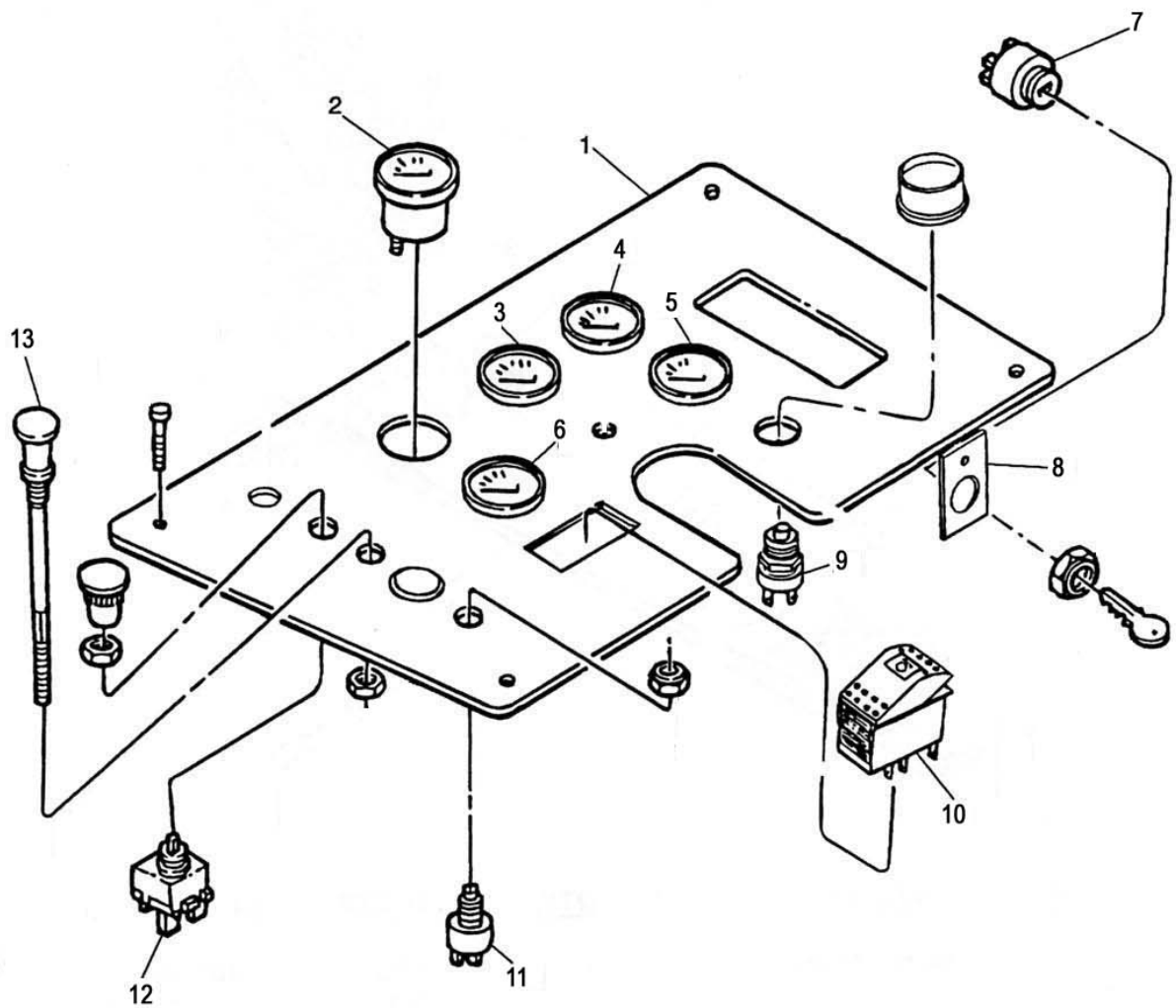
ACCELERATOR PEDAL ASSEMBLY—DETAIL

| ITEM | PART NUMBER | QTY. | DESCRIPTION |
|------|---------------|------|--------------------------------|
| 1 | A-TT4-00281-1 | 1 | FOOT PEDAL ASSEMBLY |
| 2 | NPN | 3 | SCREW-HEX CAP-1/4-20 X 1.00 G8 |
| 3 | NPN | 3 | WASHER-FLAT-1/4 |
| 4 | NPN | 3 | NUT-LOCK-1/4-20 |
| 5 | A-TT4-00285* | 1* | CABLE CLASP* |
| 6 | A-TT4-00287 | 1 | BALL JOINT KIT - NUT INCLUDED |
| 7 | A-TT4-00282 | 1 | ACCELERATOR CABLE |
| 8 | A-TT4-00288 | 1 | ACCELERATOR U-BOLT KIT |
| 9 | A-TT4-00283-1 | 1 | ACCELERATOR CLEVIS-PIN KIT |

*CLASP MUST BE WELDED TO BRACKET

OPERATOR COMPARTMENT

INSTRUMENT PANEL



OPERATOR COMPARTMENT

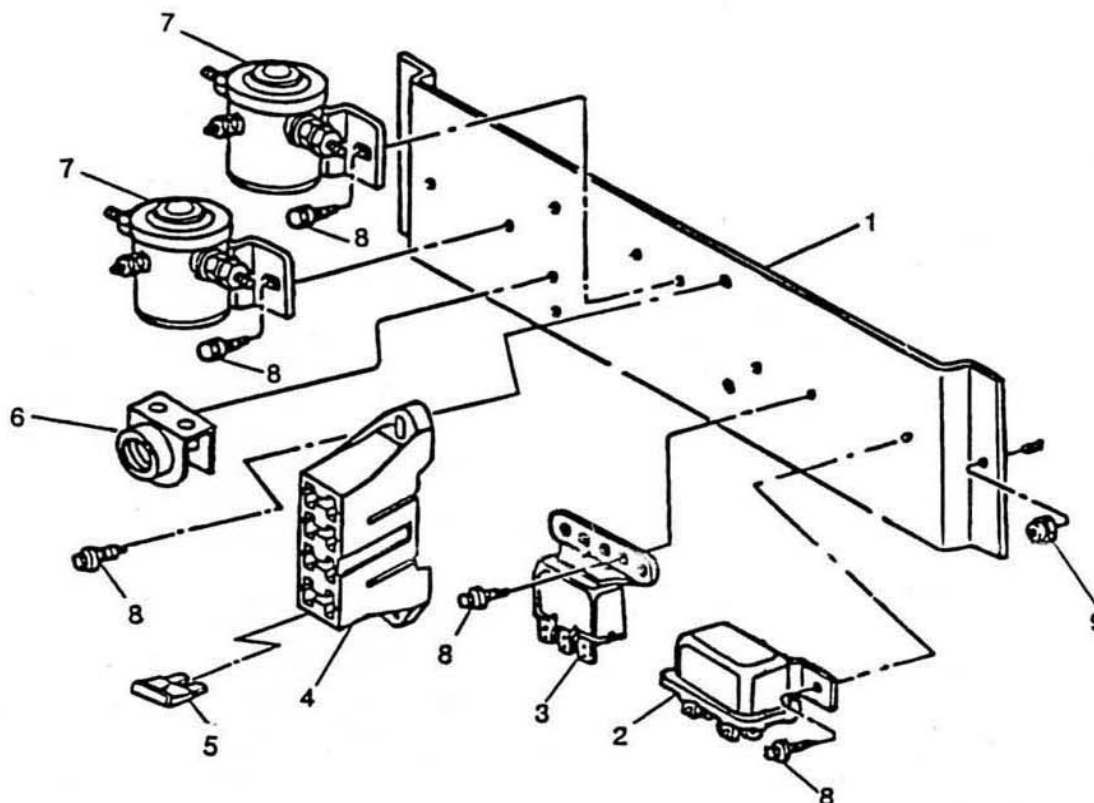
INSTRUMENT PANEL – DETAIL

| Item | Part Number | Qty | Description |
|------|--|-----|----------------------------------|
| 1 | C-TT4-00411 | 1 | DASH PANEL (NO INSTRUMENTS) |
| 2 | A-TT4-00412 | 1 | OIL PRESSURE GAUGE |
| 3 | A-TT4-00415 | 1 | FUEL GAUGE |
| 4 | A-TT4-00416 | 1 | VOLT-AMP GAUGE |
| 5 | A-TT4-00417 | 1 | TEMP GAUGE |
| 6 | A-TT4-00418 | 1 | HOUR METER |
| 7 | A-TT4-00422-2 | 1 | IGNITION SWITCH (KEYED OPTION) |
| 7 | A-TT4-00422-3 | 1 | IGNITION SWITCH (KEYLESS OPTION) |
| 8 | A-TT6-0015-1 | 1 | PLATE, MOUNTING IGNITION SWITCH |
| 9 | TMD27M00200 | 1 | GLOW PLUG SWITCH |
| 10 | A-TT4-00423-1 | 1 | HEAD LIGHT SWITCH |
| 11 | A-TT4-00428 | 1 | HORN BUTTON |
| 12 | A-TT4-00609 | 1 | HEATER FAN SWITCH |
| 13 | A-TT4-00608 | 1 | TEMPERATURE CONTROL CABLE |
| NS | A-TT4-00434-1 | 1 | WIRE HARNESS (DASH ONLY) |
| NS | A-TT4-00435-1 | 1 | 80 AMP CIRCUIT BREAKER |
| NS | AE-OPT-0084 | 1 | AMMETER(OPTION) |
| NS | AE-OPT-00152 | 1 | TRANSMISSION FLUID TEMP |
| | The following optional items are NOT SHOWN | | |
| 14 | AE-OPT-0080 | 1 | HI TEMP-LO OIL SHUTDOWN (OPTION) |
| 15 | 9B3215 | 1 | SHUTDOWN MODULE |
| 16 | 275-1 | 1 | LOW OIL BUZZ LITE |
| 17 | 275-2 | 1 | HI TEMP BUZZ LITE |
| 18 | 8611931F | 2 | LENS COVER BUZZ LITES |

NOTES:

LIGHTS & ELECTRICAL

ELECTRICAL BOARD

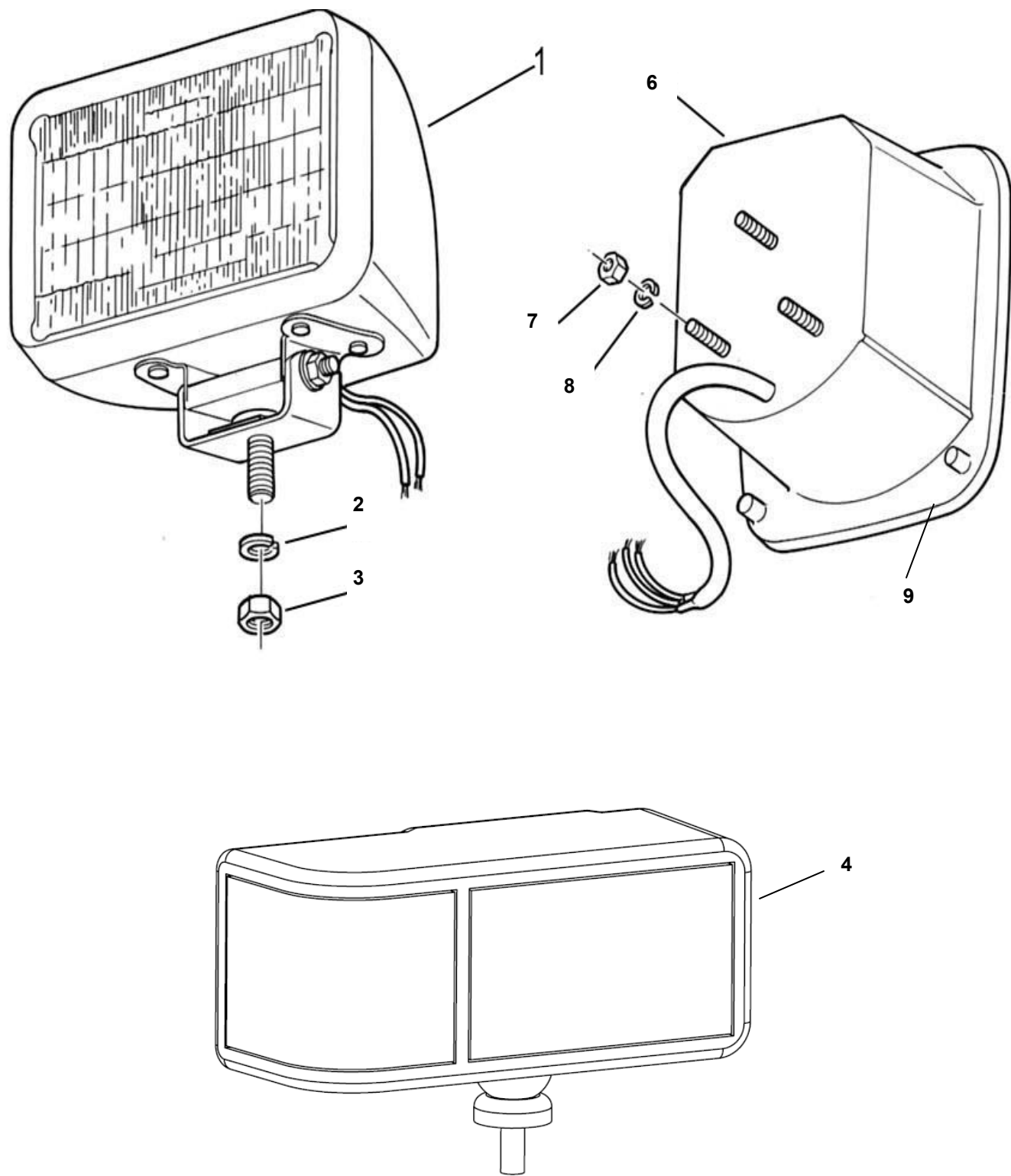


ELECTRICAL BOARD—DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|-----------------------|
| 1 | B-TT4-00301 | 1 | MOUNTING BRACKET |
| 2 | A-TT4-00302 | 1 | STARTER RELAY |
| 3 | A-TT4-00303-1 | 1 | HORN RELAY |
| 4 | A-TT4-00307 | 1 | FUSE BLOCK-SPADE TYPE |
| 5 | A-TT4-00309 | 4 | FUSE (25 AMP) |
| 6 | 98253-00410 | 1 | GLOW PLUG REISITER |
| 7 | A-TT4-00308 | 2 | RELAY |
| 8 | NPN | 10 | SELF DRILLING SCREWS |
| 9 | NPN | 2 | LOCK NUT 10-32 |

LIGHTS & ELECTRICAL

HEADLIGHT & TAILLIGHT ASSEMBLY



LIGHTS & ELECTRICAL

HEADLIGHT & REAR SPOT LIGHT ASSEMBLY—DETAIL

| Item | Part Number | Qty | Description |
|------|-----------------------------------|-----|-------------------------------------|
| 1 | A-TT10-00291 | 2 | HEADLIGHT |
| 2 | NPN | 2 | NUT-1/2-13 |
| 3 | NPN | 6 | NUT-1/4-20 |
| 4A | AE-OPT-0075-1 (TEAR DROP STYLE) | 2 | HEADLIGHT WITH TURN SIGNAL (OPTION) |
| 4B | A-TT4-00291-6 (RECTANGULAR STYLE) | 2 | HEADLIGHT WITH TURN SIGNAL (OPTION) |
| 5 | A-TT4-00291-5 (NOT SHOWN) | 1 | REAR FACING SPOT LIGHT |

TAILLIGHT ASSEMBLY—DETAIL

| Item | Part Number | Qty | Description |
|------|-------------|-----|-----------------|
| 6 | A-TT4-00292 | 2 | TAILLIGHT |
| 7 | NPN | 2 | WASHER-FLAT-1/2 |
| 8 | NPN | 6 | WASHER-FLAT-1/4 |
| 9 | 73-1912 | | TAIL LENS COVER |

REPLACEMENT BULBS

| Item | Part Number | Qty | Description |
|------|-------------|-----|---|
| 10 | H4 | | REPL BULB ITEMS 1 AND 4A |
| 11 | H3 | | REPL BULB ITEM 5 |
| 12 | 1157 | | REPL BULB BRAKE LIGHT ITEM 6 & TURN SIGNAL ITEM 4B |
| 13 | 1156 | | REPL BULB REVERSE LIGHT ITEM 6 |
| 14 | 3157 NA | | REPL BULB TURN SIGNAL ITEM 4 |
| 15 | H6545 | | SEALED BEAM FOR ITEM 4B |

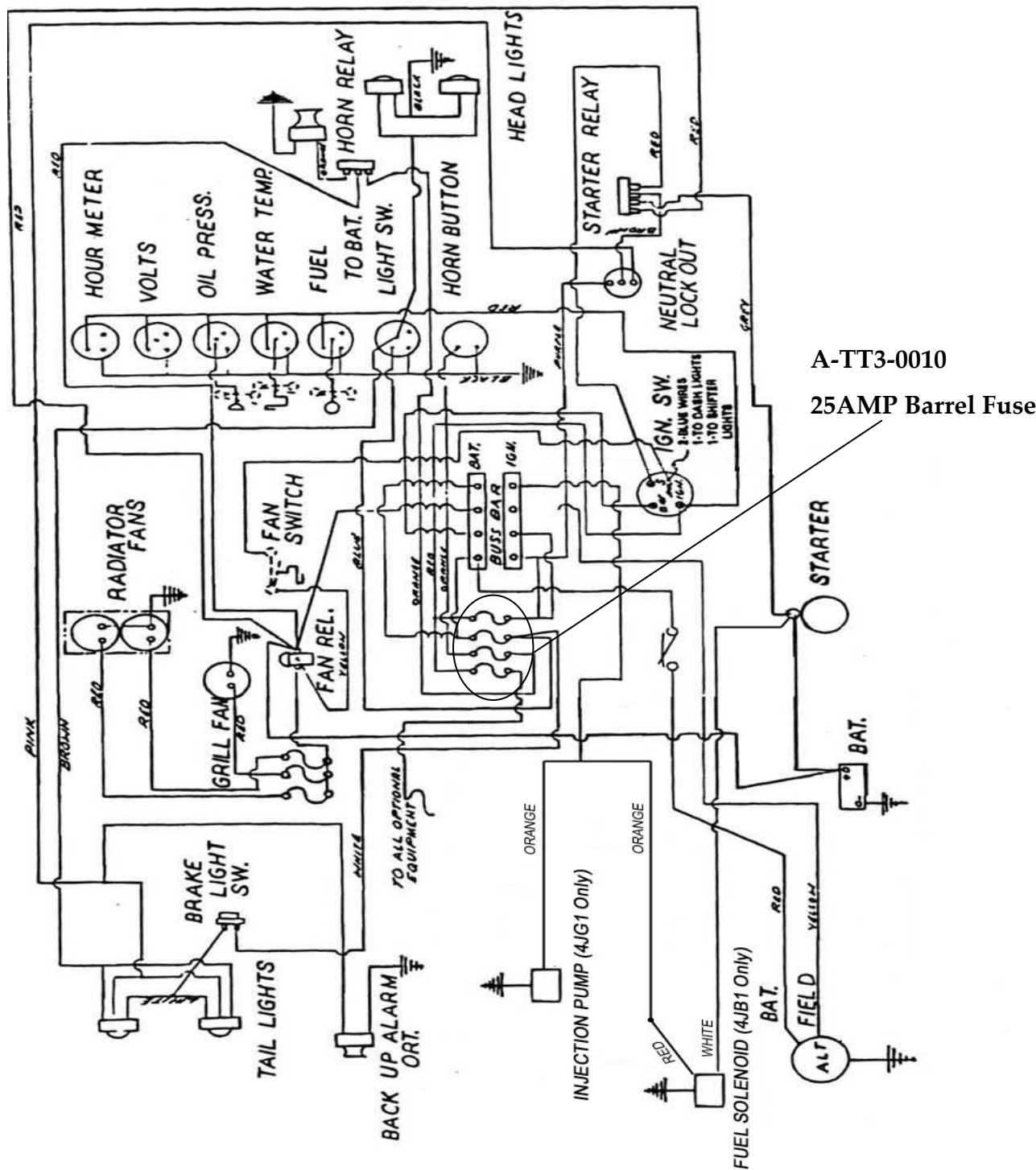
OPTIONS NOT SHOWN

| Item | Part Number | Qty | Description |
|------|-------------|-----|-------------------------------|
| 16 | AE-OPT-0076 | 2 | ROOF MOUNTED TURN SIGNAL LAMP |

**DUE TO ENGINEERING IMPROVEMENTS YOU MAY HAVE HEADLIGHTS OTHER THAN THE ONES LISTED*

LIGHTS & ELECTRICAL

WIRING HARNESS



A-TT3-0010
25AMP Barrel Fuse

| Item | Part Number | Qty | Description |
|------|-----------------|-----|-------------------------|
| 1 | AB-TT5D-00560-4 | 1 | WIRE HARNESS |
| 2 | A-TT4-00434-1 | 1 | UNDER DASH WIRE HARNESS |

LIGHTS & ELECTRICAL

WIRING SCHEMATIC

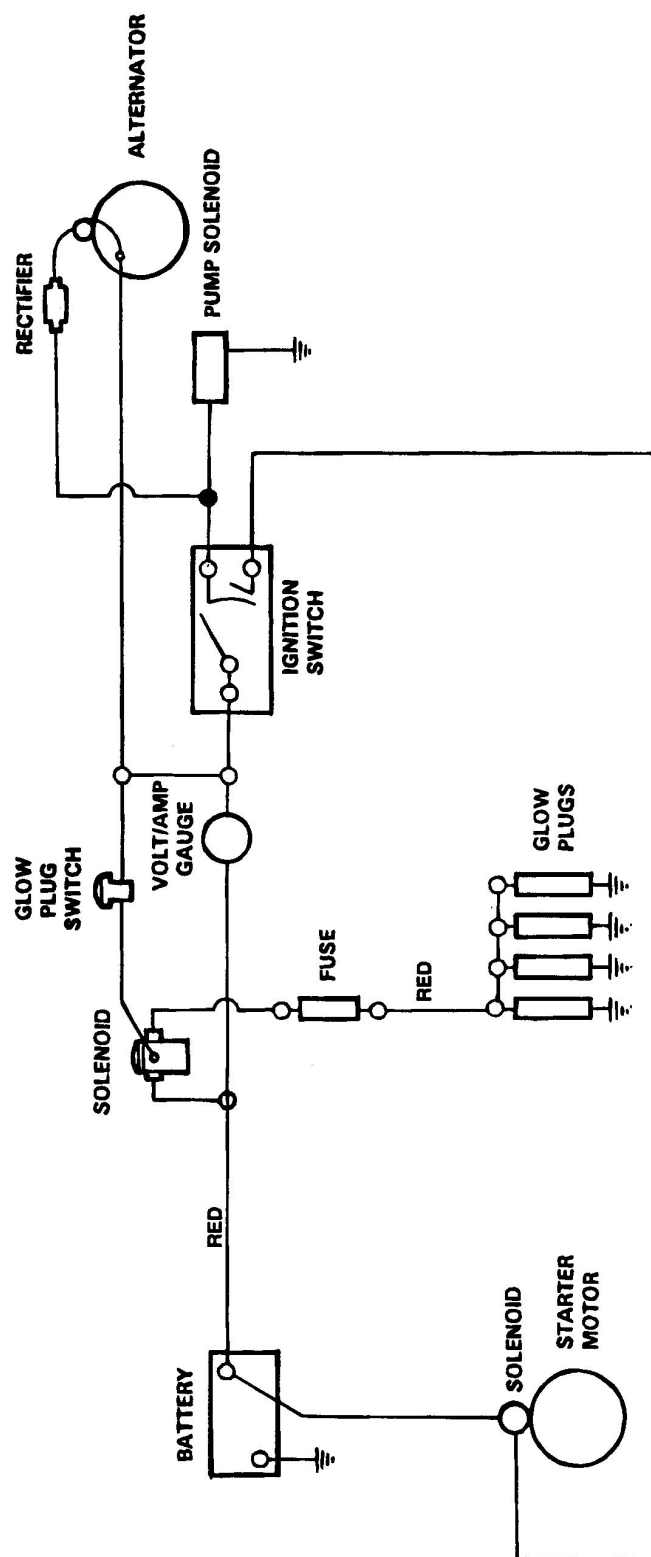


Diagram illustrating the wiring connections for the "Brute" Shutdown Module (9B3215).

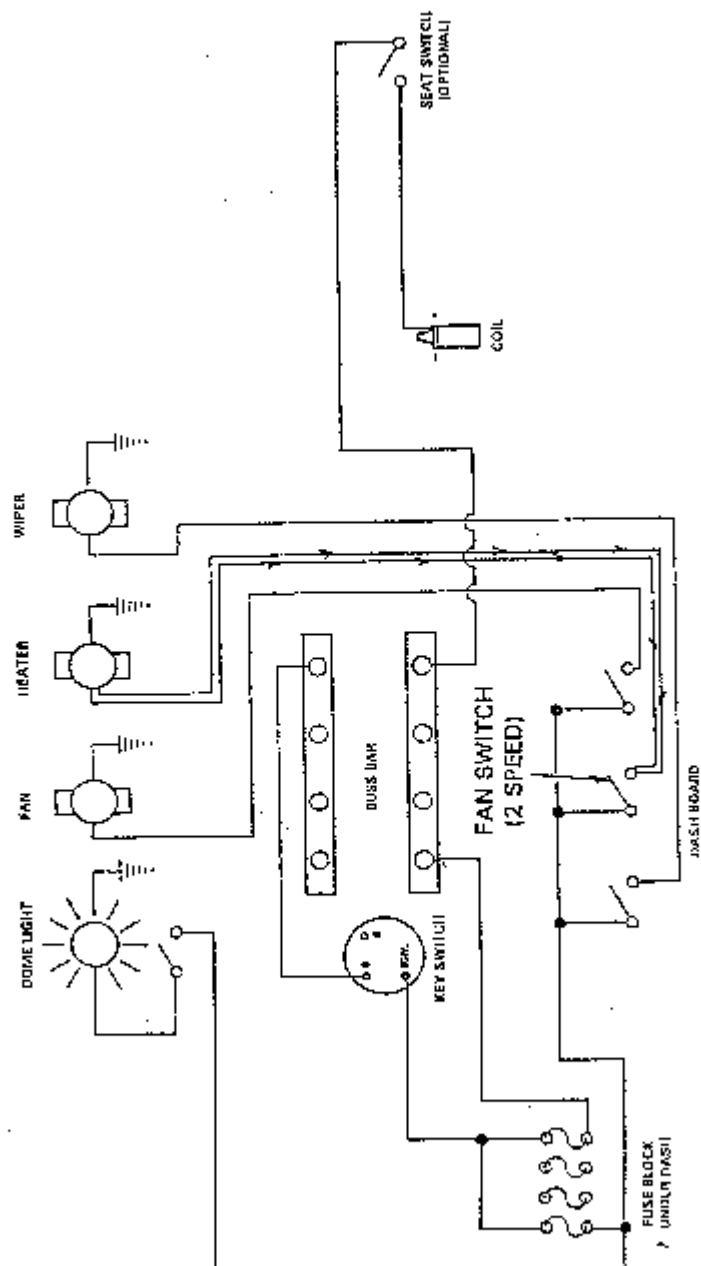
The module is connected to the following components and wires:

- Power Source:** ORANGE TO 26I 2GN (connected to the module's top terminals).
- Bus Bar:** TO BUSS BAR BOTTOM (connected to the module's top terminals).
- Control Panel (MS-2):**
 - Steady:** Connected to the module's top terminals (Orange, Blue, Red).
 - Pulse:** Connected to the module's top terminals (Red, Black, Orange).
 - Hi Temp:** Connected to the module's top terminals (Black, Orange).
 - Low Oil:** Connected to the module's top terminals (White, Blue).
- Grounding:** Ground Wire 12 (connected to the module's bottom terminals).
- Terminal Block (7):** Connected to the module's bottom terminals (White, Green, Orange, Blue, Red).
- Other Components:**
 - 2:** Module label.
 - 4:** MS-2 control panel label.
 - 5:** Hi Temp indicator label.
 - 7:** Terminal block label.
 - 8:** Grounding symbol label.
 - 9:** Grounding symbol label.
 - 10:** MS-2 control panel label.
 - 11:** Grounding symbol label.

TT4-8 Isuzu 4JB1, 4JG1

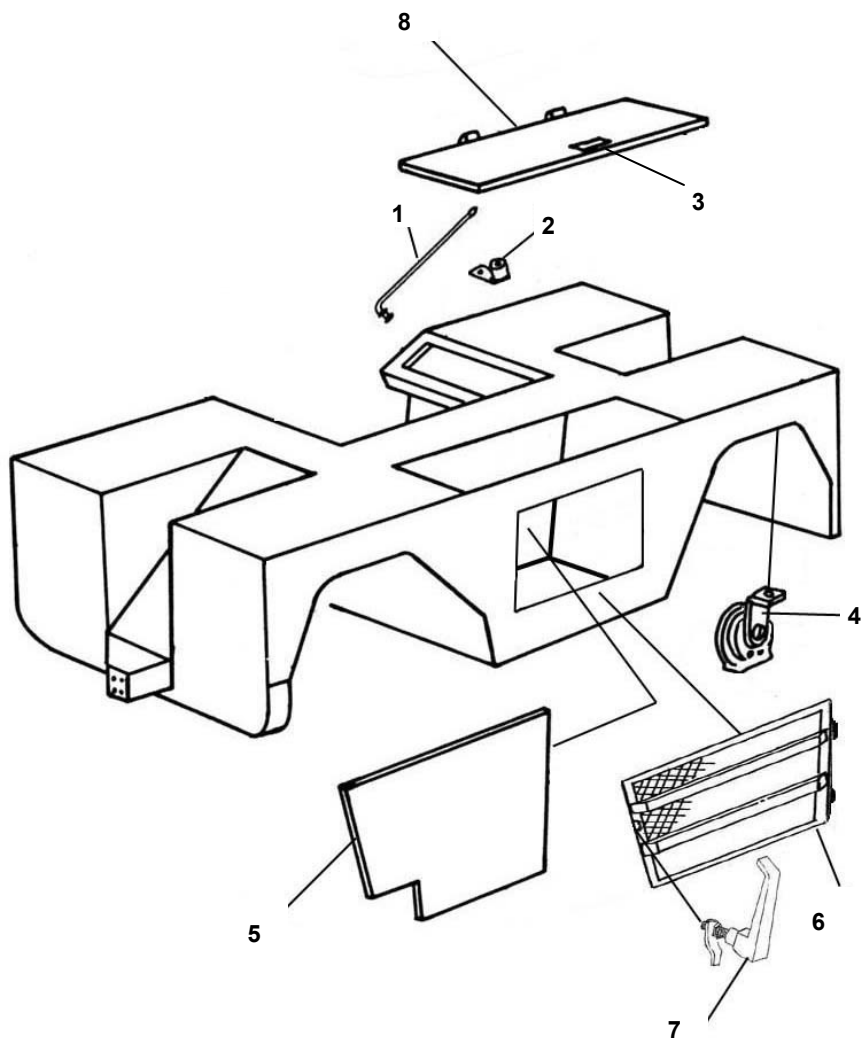
LIGHTS & ELECTRICAL

CAB OPTION WIRING



OTHER ASSEMBLY

BODY ASSEMBLY

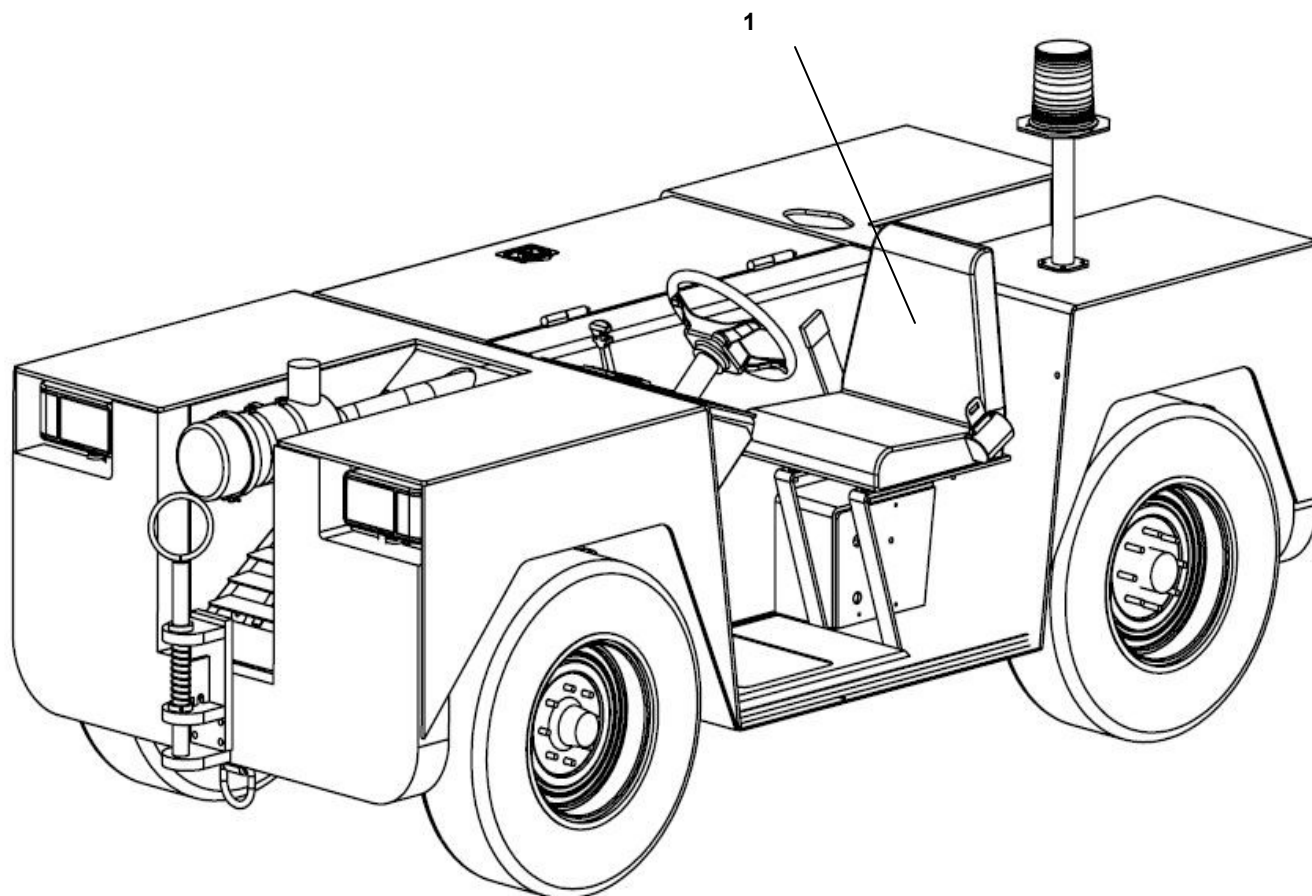


BODY ASSEMBLY –DETAIL

| Item | Part Number | Qty | Description |
|------|--------------|-----|-------------------------|
| 1 | NPN | 1 | HOOD PROP |
| 2 | NPN | 1 | HOOD PROP ASSEMBLY |
| 3 | C-TT4-0012-2 | 1 | T-HANDLE LATCH |
| 3 | C-TT4-0012-3 | 1 | LOCKING T-HANDLE LATCH |
| 4 | A-TT4-0052 | 1 | HORN ASSEMBLY |
| 5 | A-TT4-0049 | 1 | HEAT SHIELD |
| 6 | D-TT4-0009-1 | 1 | GRILL GUARD/ACCESS DOOR |
| 7 | 62-10-603-20 | 1 | LATCH FOR ACCESS DOOR |
| 8 | C-TT4-0012 | 1 | HOOD |

OTHER ASSEMBLY

SEATS

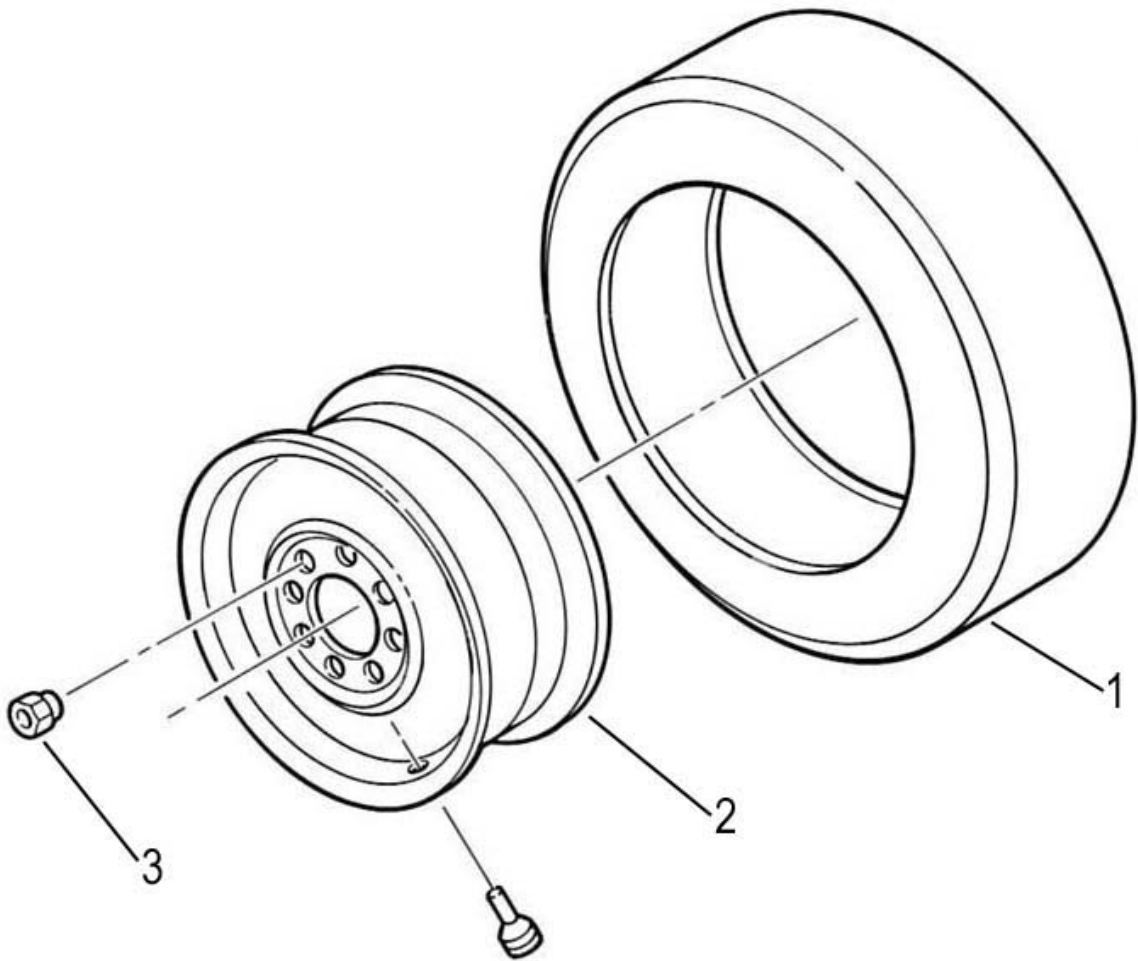


SEAT ASSEMBLY –DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|--------------------------------------|
| 1 | A-TT4-0048-1 | 1 | STANDARD SEAT |
| 2 | AE-OPT-0055-A | 1 | STANDARD SEAT BOTTOM CUSHION |
| 3 | AE-OPT-0090 | 1 | STAND |
| 3 | A-TT10-00048 | 1 | BENCH SEAT (DUAL REAR WHEEL MODELS) |
| 4 | AE-OPT-0055-B | 1 | BENCH SEAT BACK CUSHION |
| 5 | AE-OPT-0055-C | | BENCH SEAT BOTTOM CUSHION |
| 6 | AE-OPT-0183 | 1 | BENCH SEAT WITH KILL SWITCH (OPTION) |
| 7 | E10000 | 1 | SEAT BELT |

WHEELS & TIRES

WHEEL & TIRE ASSEMBLY



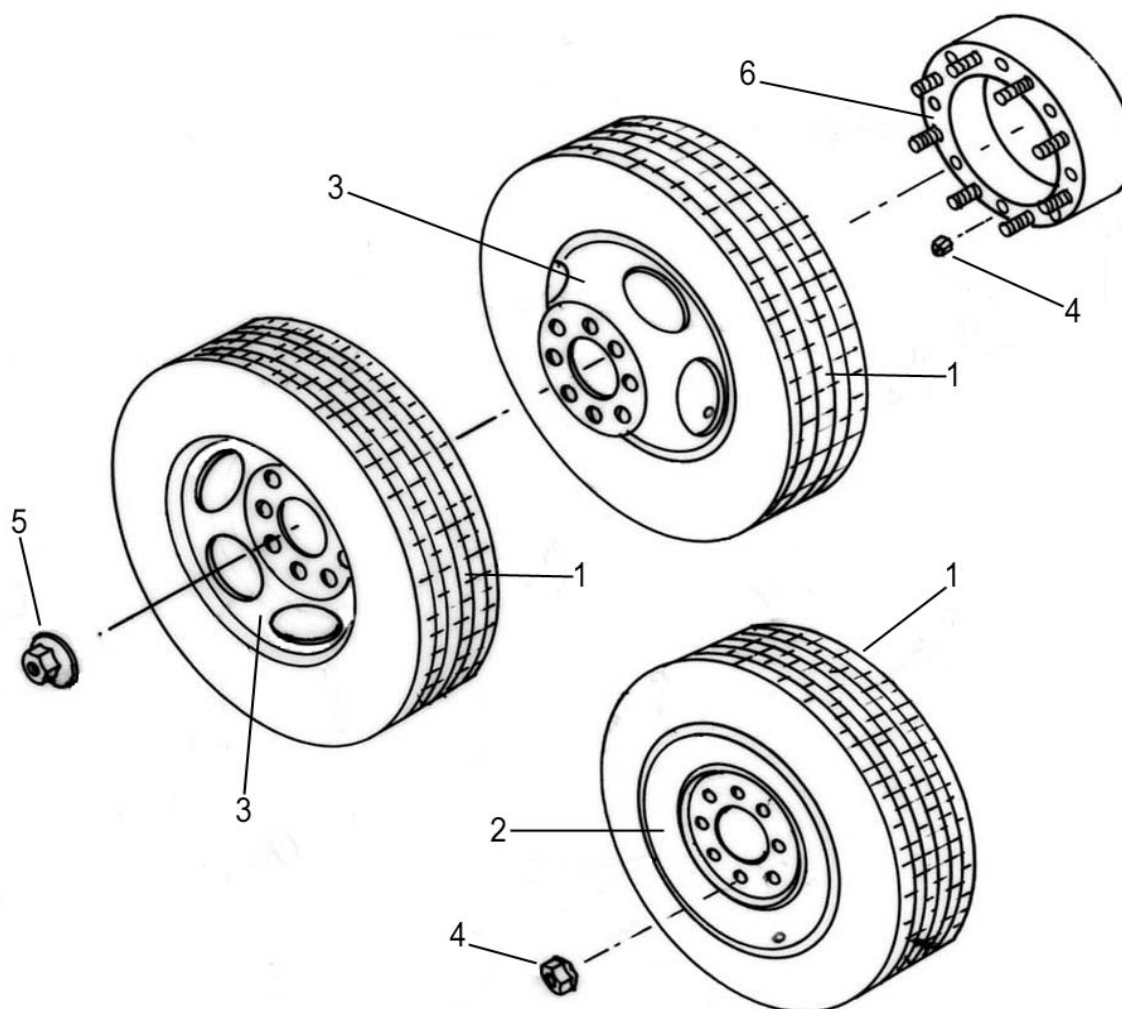
WHEEL & TIRE ASSEMBLY—DETAIL

| Item | Part Number | Qty | Description |
|------|-----------------|-----|---------------------|
| 1 | A-TT4-00121 | 4 | STANDARD TIRE 16.5" |
| 2 | A-TT4-00122 | 4 | STANDARD RIM |
| 1 | A-TT8/2-00121-1 | 4 | TIRE 16" |
| 2 | A-TT4-00122-1 | 4 | RIM 16" |
| 3 | A-TT4-00123 | 32 | LUG NUT |
| * | AE-OPT-0068 | 4 | SNOW TIRE (OPTION) |

* All current models now equipped with standard 16” tire & rim

WHEELS & TIRES

WHEEL & TIRE ASSEMBLY—DUAL REAR WHEEL MODELS

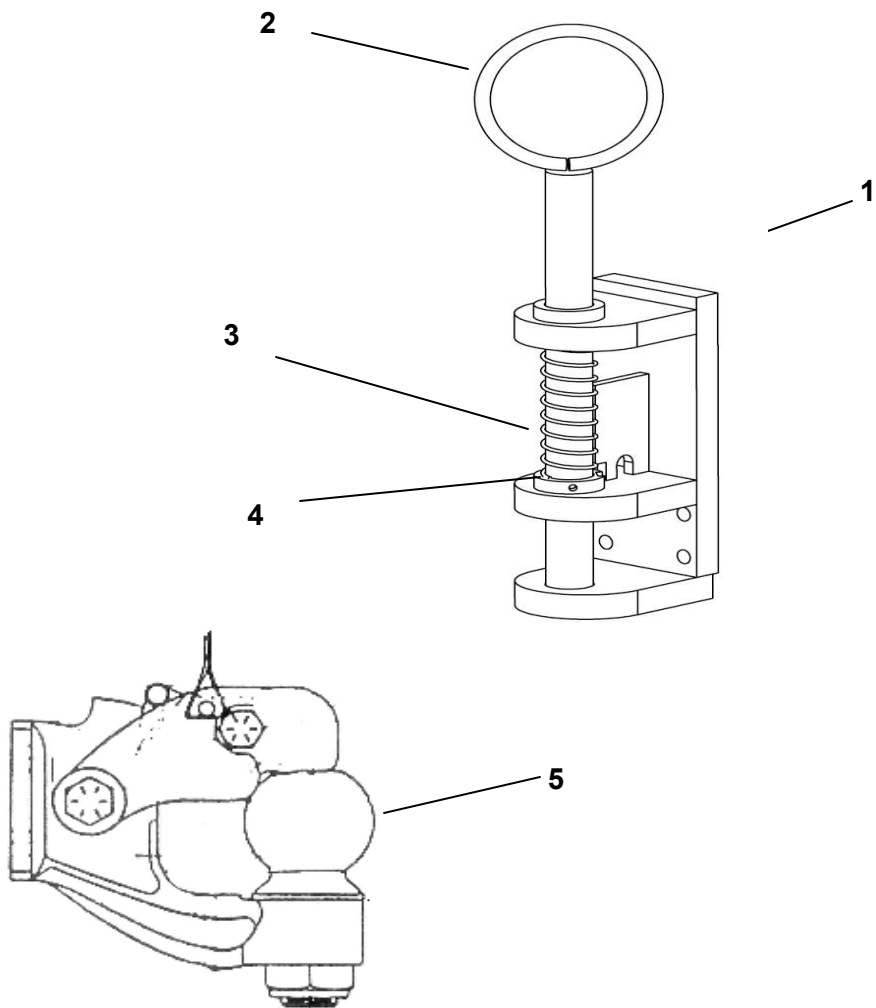


WHEEL & TIRE ASSEMBLY—DUAL REAR WHEEL MODELS—DETAIL

| Item | Part Number | Qty | Description |
|------|-----------------|-----|-------------------|
| 1 | A-TT8/2-00121-1 | 6 | STANDARD TIRE 16" |
| 2 | A-TT8/2-00122 | 2 | RIM-FRONT |
| 3 | A-TT8/2-00126 | 4 | RIM-REAR |
| 4 | A-TT4-00123 | 32 | LUG NUT |
| 5 | A-TT8/2-00123 | 16 | WHEEL LUG NUT |
| 6 | A-TT8/2-00127 | 2 | WHEEL ADAPTER |

OPTIONS

HITCH OPTIONS



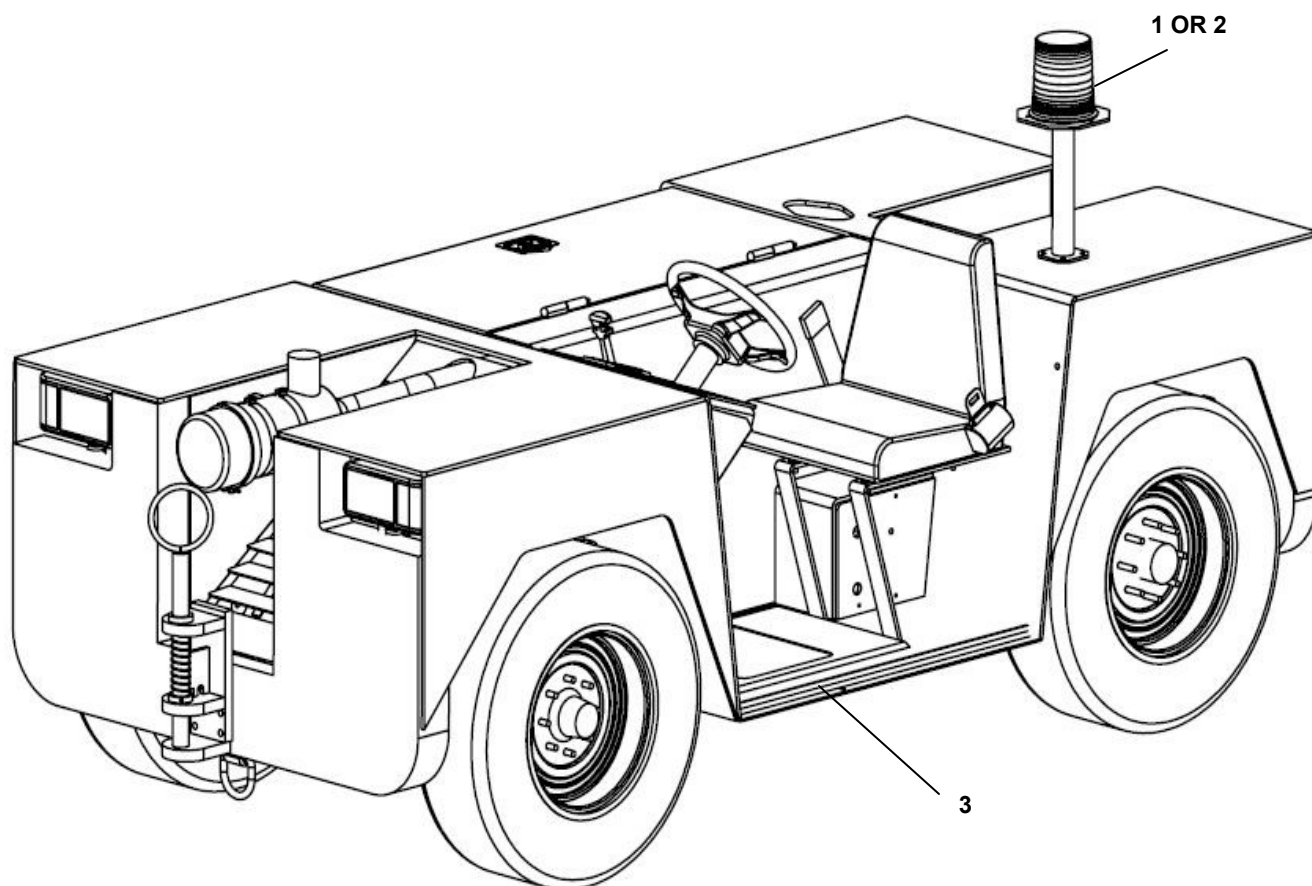
HITCH OPTION – DETAIL

| Item | Part Number | Qty | Description |
|------|-----------------|-----|--|
| 1 | AE-OPT-0033 | 1 | E-HITCH 1 1/2 " PIN-COMPLETE ASSEMBLY |
| 2 | B-TT3-0008 DET2 | 1 | E-HITCH GUIDE 1 1/2" GUIDE PIN WITH RING |
| 3 | B-TT3-0008A | 1 | E-HITCH SPRING |
| 4 | B-TT3-0008 DET5 | 1 | LOCKING COLLAR |
| 5 | AE-OPT-0028 | 1 | PINTLE HOOK |
| 6 | AE-OPT-0026 | 1 | AIRLINE HITCH 3" PIN WITH CABLE(NOT SHOWN) |
| 7 | AE-OPT-0093 | 1 | AIRLINE HITCH 2 3/8" PIN (NOT SHOWN) |

* The above are standard hitch options. Please call for special hitch options information

OPTIONS

STROBE, BEACON & FLOOR MAT OPTIONS

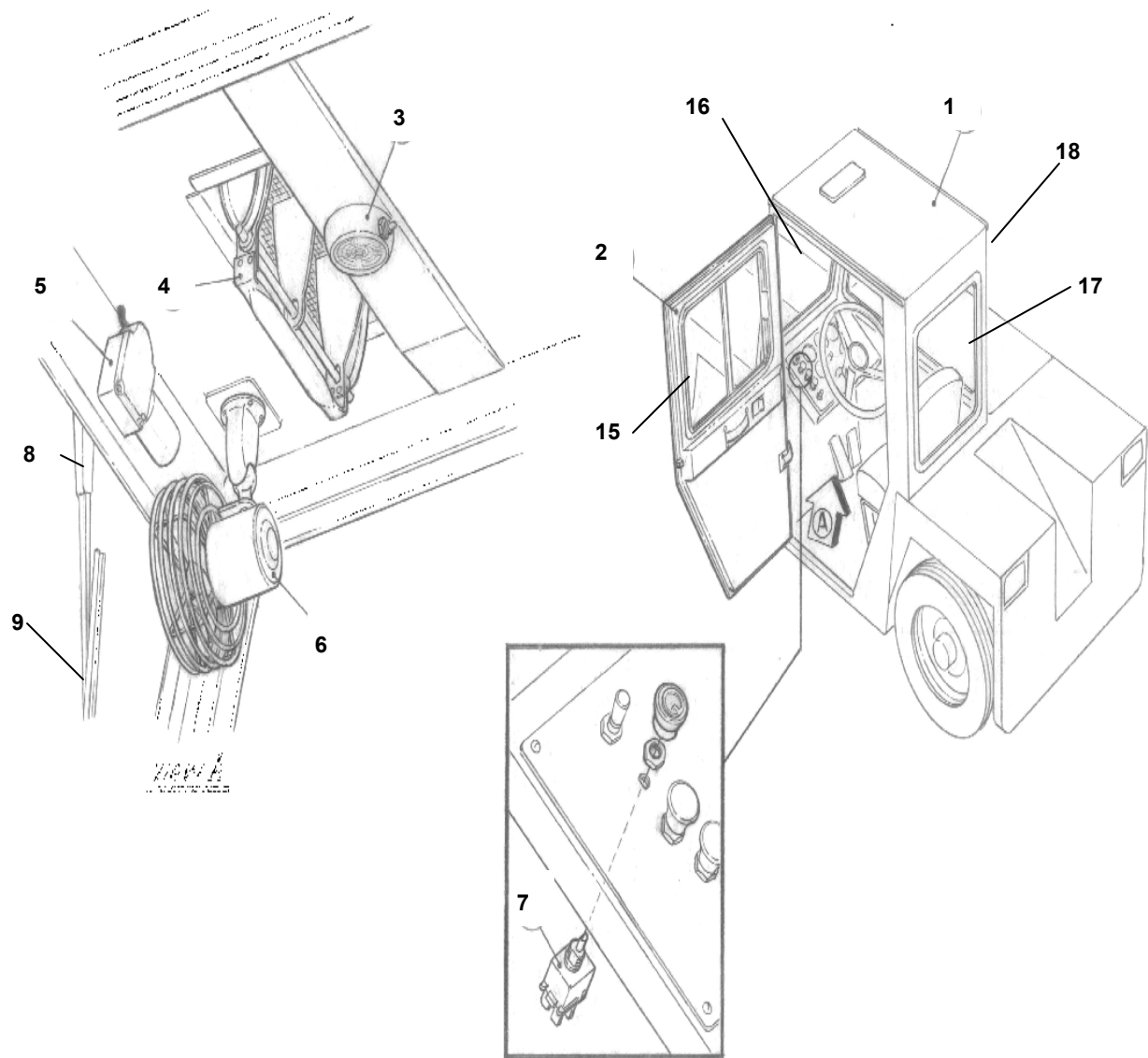


STROBE, BEACON & FLOOR MAT OPTION – DETAIL

| Item | Part Number | Qty | Description |
|------|---------------|-----|-----------------------------------|
| 1 | AE-OPT-0002 | 1 | AMBER ROTATING BEACON |
| 1A | R5024BH | 1 | REPLACEMENT BULB 24VDC |
| 1B | R5012BH | 1 | REPLACEMENT BULB 12VDC |
| 2 | AE-OPT-0007 | 1 | STROBE |
| 2A | 129 | 1 | REPLACEMENT BULB FOR STROBE |
| 2B | AE-OPT-0009 | 1 | 1/2 COVER FOR STROBE |
| 3 | A-TT4-00450 | 1 | BASIC FLOOR MAT(NO SENSOR) |
| 3A | A-TT4-00450-1 | 1 | OPERATOR SWITCH MAT (WITH SENSOR) |
| 3B | A-TT10-00451 | 1 | SWITCHMAT DELAY TIMER |

OPTIONS

CAB OPTION



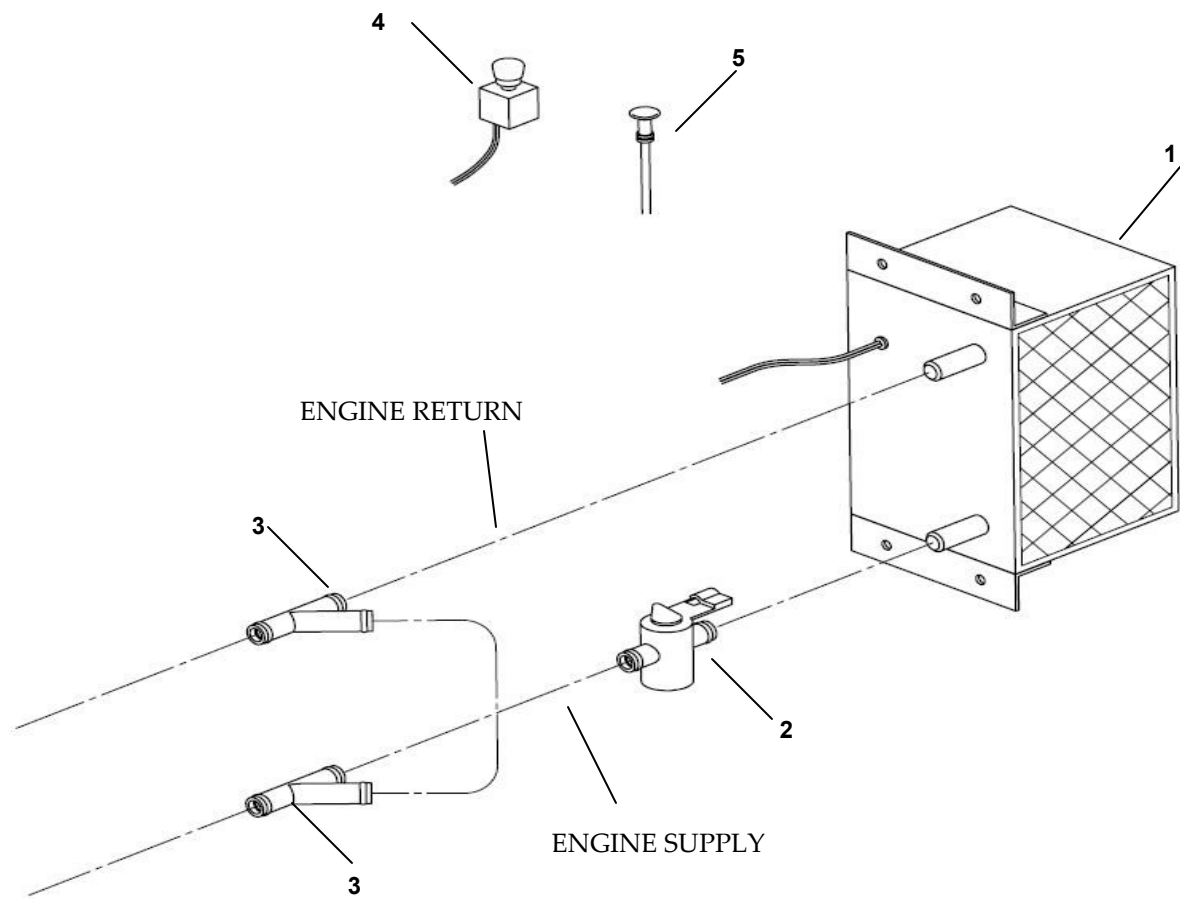
OPTIONS

CAB OPTION DETAIL

| Item | Part Number | Qty | Description |
|------|-------------|-----|--|
| 1 | AE-OPT-0004 | 1 | CAB ASSEMBLY COMPLETE |
| 1 | AE-OPT-0003 | | CAB ASSEMBLY COMPLETE (DUAL REAR WHEEL MODEL) |
| 2 | 40502 | 1 | DOOR ASSEMBLY COMPLETE |
| 3 | A-TT4-00553 | 1 | DOME LITE |
| 4 | A-TT4-00554 | 1 | ROOF VENT |
| 5 | A-TT4-00555 | 1 | WIPER MOTOR |
| 6 | A-TT4-00556 | 1 | DEFROST FAN |
| 7 | A-TT4-00609 | 1 | HEATER FAN SWITCH |
| 8 | 991013 | 1 | WIPER ARM |
| 9 | 990994 | 1 | WIPER BLADE |
| 10 | 40516 | 3 | DOOR HINGE |
| 11 | 40515 | 1 | STRIKER PLATE |
| 12 | 48717 | 1 | INSIDE DOOR HANDLE |
| 13 | 990237 | 1 | OUTSIDE DOOR HANDLE |
| 14 | 991529 | 2 | DOOR STRAP |
| 15 | 992518 | 1 | DOOR WINDOW |
| 16 | 992424 | 1 | WINDSHEILD |
| 16 | 992520 | | WINDSHEILD (DUAL REAR WHEEL MODEL) |
| 17 | 991867 | 1 | REAR WINDOW |
| 17 | 992521 | | REAR WINDOW (DUAL REAR WHEEL |

OPTIONS

CAB HEATER DETAIL



| Item | Part Number | Qty | Description |
|------|--------------|-----|-----------------------------|
| 1 | A-TT4-00601 | 1 | HEATER ASSEMBLY |
| 2 | A-TT4-00607D | 1 | CONTROL VALVE |
| 3 | 02220200A | 2 | Y CONNECTOR |
| 4 | A-TT4-00609 | 1 | HEATER FAN SWITCH |
| 5 | A-TT4-00608 | 1 | TEMPERATURE CONTROL CABLE |
| 6 | NPN | 2 | 5/8 HEATER HOSE (NOT SHOWN) |

OPTIONS

OTHER OPTIONS LISTED NOT SHOWN

| Item | Part Number | Qty | Description |
|------|--------------|-----|--|
| 1 | AE-OPT-0091 | 1 | LUBRICITY FILTER SYSTEM |
| 2 | FS20000 | 1 | LUBRICITY REPLACEMENT ELEMENT |
| 3 | AE-OPT-0001 | 1 | BACK UP ALARM |
| 4 | AE-OPT-0099 | 1 | MASTER BATTERY DISCONNECT SWITCH |
| 5 | AE-OPT-0099A | 1 | MASTER BATTERY DISCONNECT SWITCH- LOCKOUT LEVER KIT |
| 6 | AE-OPT-0086 | 1 | INTECOM JACK |
| 7 | AE-OPT-0094 | 1 | 12V ACCESSORY OUTLET |
| | | | |

SCHEDULED MAINTENANCE

DAILY OPERATOR RESPONSIBILITIES

Proper Fluid Checks

Engine Oil

Check engine oil with the unit on a level surface, the key in the "OFF" position, the shifter position in "PARK" and parking brake applied. Open side access door. Remove dipstick from crankcase, wipe it with a cloth. Insert it fully and take out it gently again. Check the oil level by the marks on the dipstick. The oil level must be between the "Max" level and the "Min" level. DO NOT OVERFILL! SEE PAGES 12 & 13 FOR SAFETY BULLETIN!

Coolant

DO NOT remove recovery tank cap or check coolant level while engine is hot! With engine cool, the key in the "OFF" position, the shifter position in "PARK" and the parking brake applied, open hood, set hood prop and look at left side of recovery tank. The reservoir tank is translucent, so the fluid is readily visible without removing the cap. Fluid level should be at the "Cold fill level".

Transmission Fluid

With unit in park and parking brake set in the "ON" position, start engine. Open side access door. Remove dipstick from transmission case, wipe it with a cloth. Insert it fully and take it out gently again. Check the fluid level by the marks on the dipstick. The transmission fluid level must be between the "Max" level and the "Min" level on the dipstick. DO NOT OVERFILL.

Brake Fluid

Check brake fluid with the unit on a level surface, the key in the "OFF" position, the shifter position in "PARK" and parking brake applied. Open hood, set hood prop and locate master cylinder reservoir. Remove spring clips and take off lid. Brake fluid level should be at the top of reservoir.

Power Steering Fluid

Check power steering fluid with key in "OFF" position, the shifter position in "PARK" and the parking brake applied. Open hood, set hood prop remove cap from power steering reservoir. Fluid level should be between the arrows on the indicator stick. DO NOT OVERFILL.

Recommended Filters:

| | | | |
|------------------|-------------------------------|--------------|--------------------------|
| Engine oil | Isuzu 8-94430-983-1 | Fuel Filter | Isuzu 4JB1 8-94414-796-3 |
| | Carquest 85390 | | Fleetgard FF5114 |
| | Fleetgard LF3528 | | Isuzu 4JG1 897213-4720 |
| | | | Wix 33128 |
| Air Cleaner | Donaldson P549271 Or P14-8966 | | Carquest 86128 |
| Lubricity Filter | Fleetgard FS20000 | Transmission | Wix 58705 |

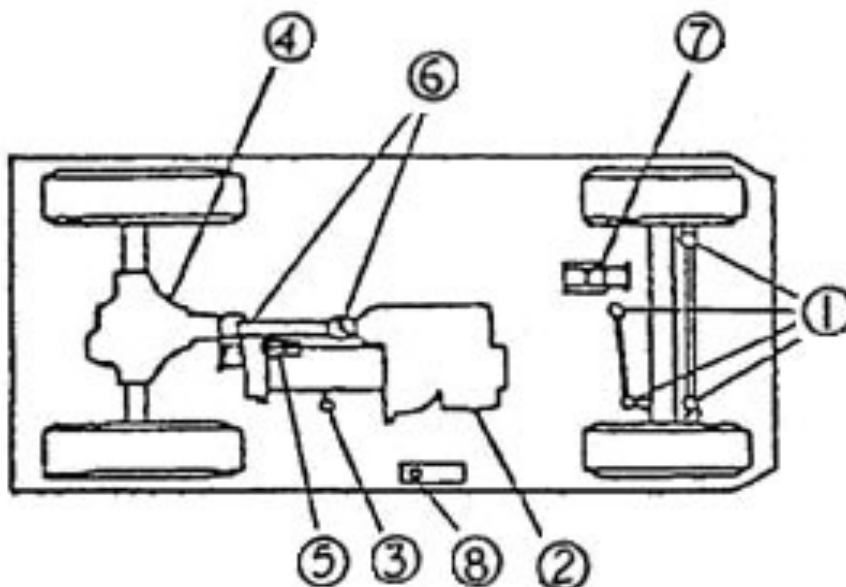
PREVENTATIVE MAINTENANCE SCHEDULE

| No. | Description of Check/Service | Operational Hours | | | | | | | | Completed |
|-----|---|-------------------|----|-----|-----|-----|-----|------|------|-----------|
| | X-Check * - Requires Service | Daily | 50 | 100 | 250 | 500 | 750 | 1000 | 1500 | |
| 1 | Engine Oil and filter *first 50 hours and every 100 hours thereafter | x | * | * | | | | | | |
| 2 | Transmission Fluid *every 500 hours | x | | | | * | | * | * | |
| 3 | Power Steering Fluid | x | | | | | | | | |
| 4 | Brake Fluid | x | | | | | | | | |
| 5 | Coolant Level | x | | | | | | | | |
| 6 | Fuel Filter *every 500 hours | | | | | * | | * | * | |
| 7 | Drain Water/Fuel Filter *every 250 hours | | | | * | * | * | * | * | |
| 8 | Lubricity Filter *every 250 hours | | | | * | * | * | * | * | |
| 9 | Oil Leak Check | x | | | | | | | | |
| 10 | Engine Rubber Mounts | | x | x | x | x | x | x | | |
| 11 | Inlet & Exhaust Pipes to Manifold | | x | x | x | x | x | x | | |
| 12 | Throttle Controls | | x | x | x | x | x | x | | |
| 13 | Coolant Hoses | | x | x | x | x | x | x | | |
| 14 | Belt Drives | | x | x | x | x | x | x | | |
| 15 | Fuel System Leak Check | | x | x | x | x | x | x | | |
| 16 | Electrical Wires and Connections | | x | x | x | x | x | x | | |
| 17 | Suspension U-Bolts | | * | | | | | | | |
| 18 | Battery Cables | | | x | | | | | | |
| 19 | Air Cleaner Element *every 250 hours | | | | * | * | * | * | * | |
| 20 | Brake Pads (Front) | | | | | x | | x | | |
| 21 | Drum Brake Lining (Rear) | | | | | x | | x | | |
| 22 | Brake Lines and Hoses | | | | | x | | x | | |
| 23 | Flush Cooling System | | | | | * | | | | |
| 24 | Clean Feed Pump Strainer | | | | | | | | * | |
| 25 | Check Injection Nozzles | | | | | x | | x | x | |
| 26 | Cylinder Compression Pressure | | | | | | | x | | |
| 27 | Valve Clearance Check | | | | | | | x | | |
| 28 | Position Crankcase Ventilation Valve Cleaning | | | | | | | | x | |
| 29 | Rotate Tires *every 500 hours | | | | | * | | * | | |
| 30 | Axle Shaft U-Joint | | * | | | | | | | |
| 31 | Spindle Nuts Re Torq to 20-30 FT LBS | | * | | | | | | | |

This section below has been added to for your record keeping convenience

| | |
|------------------------|--|
| Date Service Performed | |
| Tug Serial Number | |
| Tug Hours | |
| Technician | |

LUBRICATION CHART — REAR WHEEL DRIVE



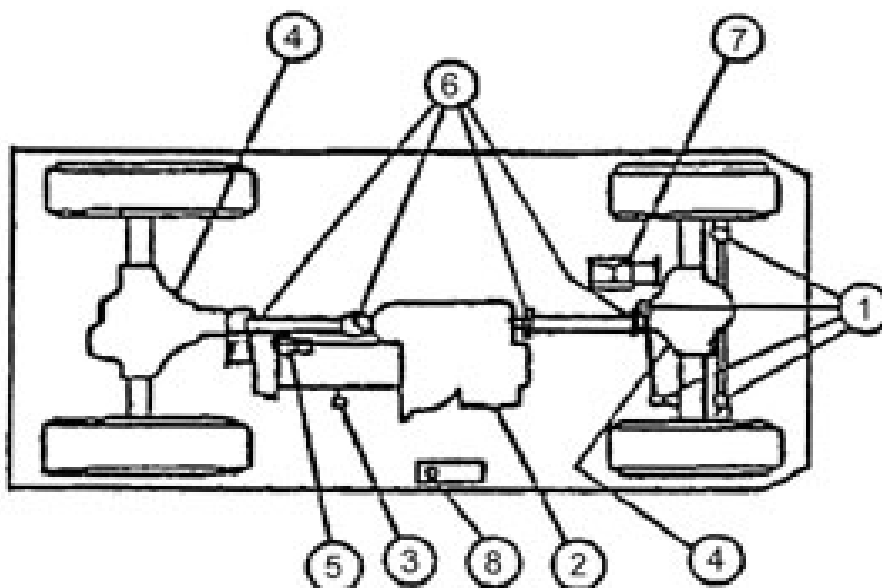
| Item | Identification | Type Service | Lubricant |
|------|-----------------------|--------------|---|
| 1 | STEERING LINKAGE | LUBE | EP MULTIPURPOSE GREASE |
| 2 | TRANSMISSION OIL | CHECK | DEXTRON III TYPE TRANSMISSION FLUID |
| 3 | ENGINE OIL | CHANGE | 15W40 CD OE/HDO (MIL-L-2104) |
| 4 | DRIVE AXLES | CHECK | 80-90 GEAR OIL (MIL-L-2105) |
| | AXLE SHAFT U-JOINT | CHECK | EP MULTIPURPOSE GREASE |
| 5 | POWER STEERING PUMP | CHECK | AUTOMOTIVE POWER STEERING FLUID |
| 6 | DRIVE SHAFT | LUBE | EP MULTIPURPOSE GREASE |
| 7 | BRAKE MASTER CYLINDER | CHECK | DOT 3 BRAKE FLUID |
| 8 | ENGINE COOLANT* | CHECK | ETHYLENE GLYCOL/ WATER (50/50 MIX) MIL-A-46153 |
| 9 | ACCELERATOR CABLE | LUBE | **SUMMER MONTHS WD40 PENETRATING OIL WINTER MONTHS ANTI FREEZE |

*CHECK WHEN ENGINE IS AT OPERATING TEMPERATURE

**IT IS RECOMMENDED BY MANUFACTURER TO PROLONG THE LIFE OF YOUR ACCELERATOR CABLE THAT THE ABOVE LUBRICATION BE FOLLOWED

SEE PREVENTATIVE MAINTENANCE SCHEDULE

LUBRICATION CHART – TT SERIES-ALL WHEEL DRIVE



| Item | Identification | Type Service | Lubricant |
|------|-----------------------|--------------|---|
| 1 | STEERING LINKAGE | LUBE | EP MULTIPURPOSE GREASE |
| 2 | TRANSMISSION OIL | CHECK | DEXTRON III TYPE TRANSMISSION FLUID |
| 3 | ENGINE OIL | CHANGE | 15W40 CDOE/HDO (MIL-L-2104) |
| 4 | DRIVE AXLES | CHECK | 80-90 GEAR OIL (MIL-L-2105) |
| | AXLE SHAFT U-JOINT | CHECK | EP MULTIPURPOSE GREASE |
| 5 | POWER STEERING PUMP | CHECK | AUTOMOTIVE POWER STEERING FLUID |
| 6 | DRIVE SHAFT | LUBE | EP MULTIPURPOSE GREASE |
| 7 | BRAKE MASTER CYLINDER | CHECK | DOT 3 BRAKE FLUID |
| 8 | ENGINE COOLANT | CHECK | ETHYLENE GLYCOL/ WATER (50/50 MIX) MIL-A-46153 |
| 9 | ACCELERATOR CABLE | LUBE | **SUMMER MONTHS WD40 PENETRATING OIL WINTER MONTHS ANTI FREEZE |

*CHECK WHEN ENGINE IS AT OPERATING TEMPERATURE

**IT IS RECOMMENDED BY MANUFACTURER TO PROLONG THE LIFE OF YOUR ACCELERATOR CABLE THAT THE ABOVE LUBRICATION BE FOLLOWED

SEE PREVENTATIVE MAINTENANCE SCHEDULE

SPECIFICATIONS & CAPACITIES

| | | | |
|--|--|--|--|
| MODEL # | ISUZU 4JG1 | | |
| DESCRIPTION: | Standard diesel, 2.8 Liter, Isuzu four cylinder, direct injection engine | | |
| # OF CYLINDERS | 4 IN-LINE, 4 CYCLE | | |
| BORE & STROKE INCHES (mm) | 3.66 X 4.01 (93 X 102) | | |
| DISPLACEMENT, CUBIC INCHES (L) | 171 (2.8) | | |
| COMPRESSION RATIO | 18.60 | | |
| FUEL | #1 OR #2 DIESEL | | |
| ALTERNATOR | 75 AMP, 12 VOLT, NEG GROUND | | |
| ENGINE WEIGHT FULLY DRESSED LB (KG) (PROX) | 557 (253) | | |
| | | | |

ENGINE CRANKCASE CAPACITIES

| ENGINE | U.S. QUARTS | IMPERIAL QUARTS | LITRES |
|--------------------------------|-------------|-----------------|--------|
| 2.8 L (171 CID) DIESEL*** | 10.00 | 8.33 | 9.46 |
| ***15W40CD IN CONTINENTAL U.S. | | | |
| | | | |

FUEL TANK REFILL CAPACITIES

| U.S. GALLONS | IMPERIAL GALLONS | LITERS |
|--|------------------|--------|
| 18.0 | 15.0 | 68.0 |
| SAE (SOCIETY OF AUTOMOTIVE ENGINEERS) NO. 2-D JIS (JAPANESE INDUSTRIAL STANDARD) NO 2 DIN (DEUTSCHE INDUSTRIE NORMEN) 51601 BS (BRITISH STANDARD) CLASS A-1 *Please refer to Isuzu Engine Instruction Manual IDE- 6053 for further information | | |

SPECIFICATIONS & CAPACITIES

TRANSMISSION REFILL CAPACITIES

| ENGINE | U.S. PINTS | IMPERIAL PINTS | LITRES |
|---|------------|----------------|--------|
| 2.8 L (171 CID) DIESEL | 8.00 | 6.60 | 3.80 |
| * USE DEXTRON III TYPE TRANSMISSION FLUID OR EQUIVALENT | | | |
| **ADD 9 PINTS, 7.5 IMPERIAL PINTS OR 4.25 LITERS IF TORQUE CONVERTOR HAS BEEN DRAINED | | | |

ENGINE COOLING SYSTEM REFILL CAPACITIES

| ENGINE | U.S. QUARTS | IMPERIAL QUARTS | LITRES |
|---|-------------|-----------------|--------|
| 2.8 L (171 CID) DIESEL | 16.00 | 13.30 | 15.10 |
| * A 50/50 MIXTURE OF GLYCOL AND CLEAN WATER | | | |

BRAKE SYSTEM

The brake system is power assisted hydraulic, front disc type and rear drum type. USE DOT 3 BRAKE FLUID.

STEERING SYSTEM

The steering system is power assisted hydrostatic type. Use TEXACO FLUID PART NO. 11872 OR EQUIVALENT SPEC FOR GM, CHRYSLER AND FORD AUTO APPLICATIONS

AXLE REFILL CAPACITIES

| AXLE | U.S. PINTS | IMPERIAL PINTS | LITRES |
|--|------------|----------------|--------|
| FRONT STEER – NON DRIVE | N/A | N/A | N/A |
| FRONT DRIVE AXLE | 5.20 | 4.37 | 2.48 |
| REAR DRIVE AXLE | 8.50 | 7.00 | 3.75 |
| * SERVICE REFILL CAPACITIES ARE DETERMINED BY FILLING TO THE BOTTOM OF THE FILLER HOLE | | | |
| **USE 80W90 HYPOID GEAR LUBRICANT | | | |

TIPS FOR INCREASED ALL WEATHER TRACTION DURING AIRCRAFT PUSHBACK

- 1.Reduce air pressure in pneumatic tires from 60 PSI to as low as 25 PSI. (**restore air pressure to 60 psi as soon as weather emergency ends).
- 2.When pushing with All Wheel Drive tractors, make sure the towbar is level or slightly downhill toward tractor.
- 3.When towing with Rear Wheel Drive-raise hitch height.
- 4.When pushing with Rear Wheel Drive-lower hitch height.

Note: These strategies(2, 3 and 4) maximize all weather traction.

- 5.When pushing aircraft on ice or icy snow with All Wheel Drive, a wheel may loose traction (wheel spin). To stop front wheel spin, apply some service brake gradually with left foot until wheel spin stops and hold, while continuing the pushback. Coordinate the left foot service brake pressure and the right foot accelerator, to maintain a smooth pushback. To stop rear wheel spin, apply parking brake with lever until it stops while continuing the pushback.
- 6.On ice or snow use chains or cables. If the use of chains is prohibited, there are traction cables that serve the same function as chains but are much easier to mount and are very kind in terms of abrasion to all surfaces.
- 7.Keep fuel tank full, as much as possible.
- 8.Consult with Eagle Tugs factory for additional assistance.

FRONT END ALIGNMENT PROCEDURE

Find center line of tire front and back

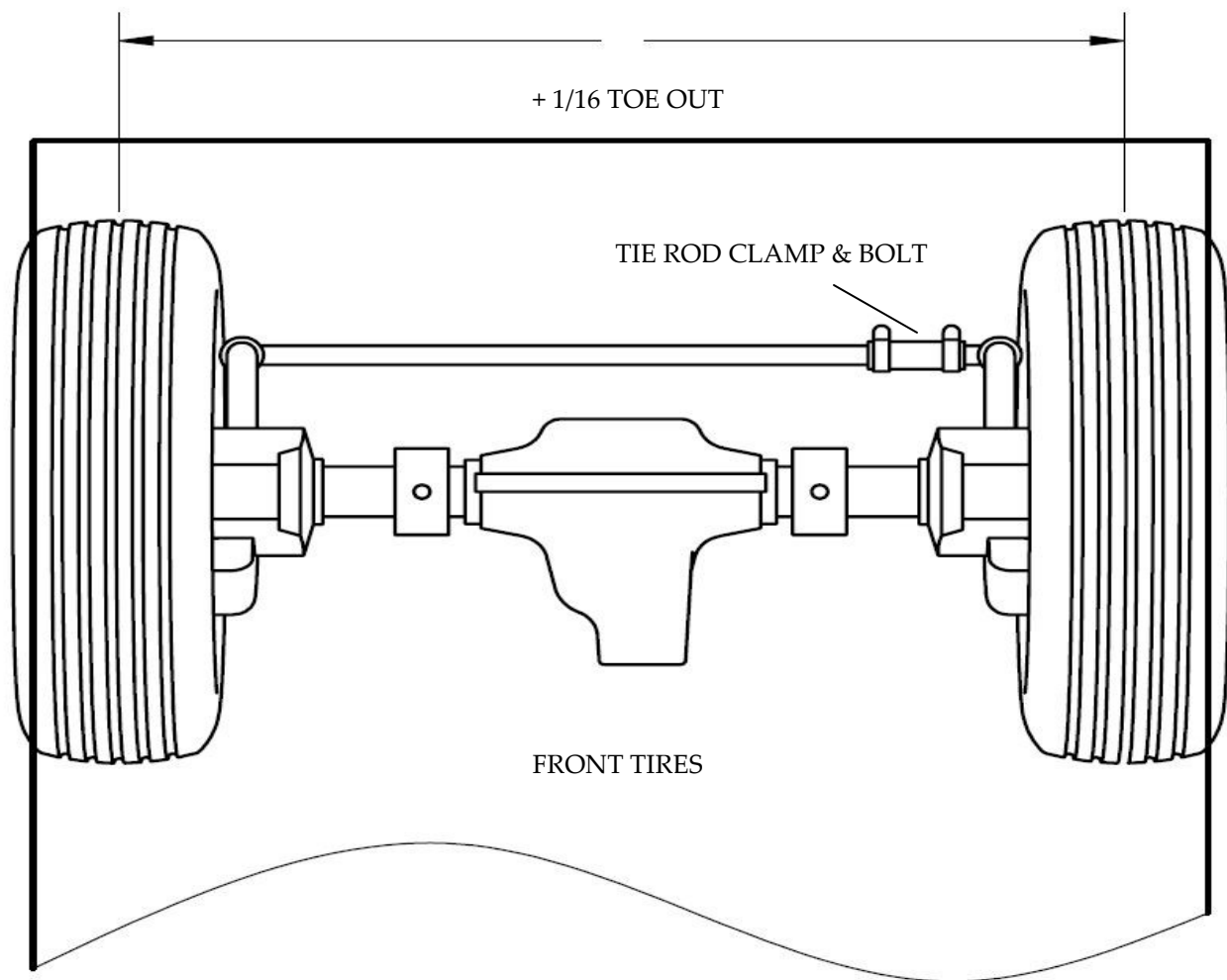
Check with tape measure to see difference

The front should be 1/16 inch more than the rear

1/16 inch toe out, if less or greater loosen the two bolts on the tie rod clamp

Turn clamp in or out to achieve desired setting—1/16 in toe out

Retighten two bolts on the tie rod clamp



TT4-8 Isuzu 4JB1, 4JG1